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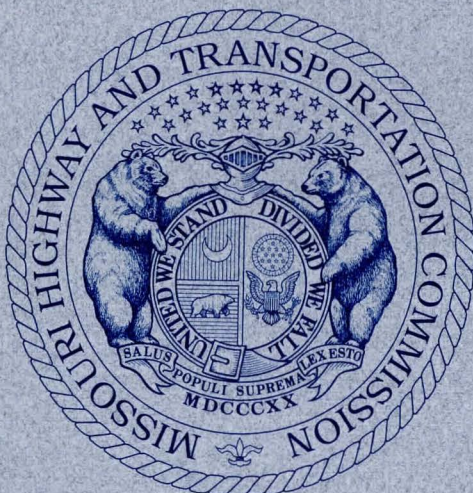
1995

July 1, 1994 to June 30, 1995

# Annual Report

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Missouri Highway and Transportation Department







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## THE COMMISSION

The Missouri Highway and Transportation Commission is a six-member bipartisan governing body for the Missouri Highway and Transportation Department. The governor, with the Senate's consent, appoints members to staggered six-year terms on the commission. No more than three commissioners may be of the same political party.

The commission appoints the chief engineer, chief counsel and commission secretary. The chief engineer, with commission approval, appoints all other appointments.

### **Missouri Highway and Transportation Commissioners at the end of fiscal year 1995 (May 1995):**

Thomas M. Boland, chairman  
John L. Oliver, Jr., vice chairman  
Carol L. Williamson, member

Thomas John Barklage, member  
James W. Gamble, member  
Robert E. Jones, member

## THE STAFF

### **Missouri Highway and Transportation Department officials at the end of fiscal year 1995 (May 1995):**

Joe Mickes, chief engineer  
Gary Chullino, assistant chief engineer  
Frank Carroll, assistant to the chief engineer-design  
Dave Snider, assistant to the chief engineer-operations  
Dave DeWitt, assistant to the chief engineer-administrative services

Rich Tiemeyer, chief counsel  
Mary Ann Winters, secretary to the commission  
Terry Porterfield, director, Audit and Business Analysis  
Al Laffoon, division engineer, Bridge  
Ken Fryer, division engineer, Construction  
Bob Sfreddo, division engineer, Design  
Clif Jett, director, Equipment and Procurement  
C.F. Barnes, director, Fiscal Services  
Rich Millard, director, Human Resources  
Lew Davison, director, Information Systems  
Jim Jackson, division engineer, Maintenance and Traffic  
Bill Trimm, division engineer, Materials and Research  
J.T. Yarnell, division engineer, Planning  
Sue Muck, director, Public Affairs  
Art Taylor, director, Right of Way  
Mel Sundermeyer, director, Transportation



# THE DISTRICTS & DISTRICT STAFF

**Missouri Highway and Transportation Department districts and district engineers at the end of fiscal year 1995 (May 1995):**

**DISTRICT 1**

3602 North Belt Highway  
P.O. Box 287  
St. Joseph, MO 64502  
816/387-2350  
Garry Chegwiddden,  
district engineer

**DISTRICT 2**

U.S. Route 63  
P.O. Box 8  
Macon, MO 63552  
816/385-3176  
Bill Yarnell, district engineer

**DISTRICT 3**

Highway 61 South  
P.O. Box 1067  
Hannibal, MO 63401  
314/248-2490  
Dick Jones, district engineer

**DISTRICT 4**

5117 East 31st St.  
Kansas City, MO 64128  
816/889-3350  
Dan Miller, district engineer

**DISTRICT 5**

1511 Missouri Blvd.  
P.O. Box 718  
Jefferson City, MO 65102  
314/751-3322  
Ron Haden, district engineer

**DISTRICT 6**

1590 Woodlake Drive  
Chesterfield, MO 63017-5712  
314/340-4100  
Freeman McCullah,  
district engineer

**DISTRICT 7**

3901 East 32nd St.  
P.O. Box 1445  
Joplin, MO 64802  
417/629-3300  
Richard Walter, district engineer

**DISTRICT 8**

3025 East Kearney  
P.O. Box 868  
Springfield, MO 65801  
417/895-7600  
Willis Graven, district engineer

**DISTRICT 9**

910 Springfield Road  
P.O. Box 220  
Willow Springs, MO 65793  
417/469-3134  
Royce Fugate, district engineer

**DISTRICT 10**

201 N. Main St.  
P.O. Box 160  
Sikeston, MO 63801  
314/472-5333  
Jim Murray, district engineer



# THE DISTRICTS

## DISTRICT I

District 1, headquartered in St. Joseph, Mo., has 445 employees working in eight departments throughout 12 counties in northwest Missouri.

District 1's Maintenance and Traffic Department has six special maintenance crews and one traffic operations crew operating in 10 maintenance areas and 32 subareas across the district. Major operations in fiscal year 1995 included: completing surface and shoulder repair to portions of the district's 3,200 miles of highways; replacing rusted culvert pipes; patching, painting and repairing channels of 685 bridges; applying more than 106,000 gallons of roadway paint; cleaning and shaping drainage ditches; and maintaining four rest areas along interstate highways. For fiscal year 1995, the cost of maintaining the highway system in District 1 exceeded \$16 million.

District 1 has three resident engineer offices; they are located in Maryville, St. Joseph and Cameron.

Major construction projects in fiscal year '95 included:

- ♦ Route 136, Atchison County – grading, drainage, widening and resurfacing
- ♦ Interstate 29, Atchison County – grading, drainage, bridge rehabilitation and resurfacing
- ♦ Route 148, Nodaway County – widening and resurfacing
- ♦ Route 148, Nodaway County – widening and resurfacing
- ♦ Route 6, Buchanan County – grading, drainage and bridge replacement
- ♦ Route 59, Buchanan County – grading, drainage, bridge replacement and PCC pavement
- ♦ Route 6, Buchanan County – widening and resurfacing

- ♦ Route 6, DeKalb County – grading, drainage and bridge replacement

- ♦ Route 6, DeKalb County – grading, drainage and two bridge replacements

- ♦ Route 6, DeKalb County – grading, drainage and bridge replacement

- ♦ Interstate 35, Harrison County – coldmilling and resurfacing, paving one lane PCC and four bridge rehabilitations.

There were 21 projects awarded in District 1 totaling \$35,508,642. In addition, 10 county road bridges were constructed with bids awarded totaling almost \$2.5 million. These projects were awarded under the Off System Program monitored by the district liaison engineer.

The Design Department has four design squads and one survey party who develop design plans for upcoming projects. The Design Department is also a liaison between counties and MHTD, coordinating utility work with contract projects, disseminating information to the public on upcoming projects, and operating and maintaining the district computer systems. District personnel represent MHTD on the Transportation Advisory Committees of the Regional Planning Commissions and on the Technical and Coordinating Committees of the St. Joseph Metropolitan Planning Organization.

The district's Equipment and Procurement Department maintains the district's equipment, which includes passenger cars, pickups, trucks and off-road equipment. This fleet is an investment of approximately \$14 million.

The district's Materials and Research Department is responsible for sampling and testing materials used in road construction and maintenance to ensure they meet established quality standards.



Inspection of items, such as seed, corrugated metal pipe, precast concrete drop inlets and precast concrete manholes, is also performed for other districts. The Materials and Research Department is responsible for designing portland cement concrete and asphaltic concrete mix, sub-surface investigations for road and bridge design, investigating the performance of new materials and methods for the department's use, and special sampling and testing required by the Federal Highway Administration on federal-aid projects.

There are five employees in District 1's Right of Way Department. This department acquires right of way for projects, maintenance lots and other department projects. During fiscal year '95, the district's Right of Way Department purchased 24 parcels of real estate totaling \$78,113. This department also handles the sale of excess property for the district. Receipts for leases and sale of excess property in fiscal year '95 totaled \$6,585.60.

The district's Human Resources Department coordinates the following activities: recruitment, hiring, Equal Employment Opportunity, Affirmative Action, training and development, policy interpretation, career planning, compensation, benefits, employee and supervisory counseling, complaint and grievance procedures, physicals, drug and alcohol testing, ADA, and temporary modified duty.

The district's Fiscal Services Department handles payroll, time sheets, overdimension permits, inventories and processing commercial invoices. Fiscal Services personnel are responsible for processing incoming and outgoing mail, maintaining the district office and garage, handling personnel matters, insurance, appointments, typing and phone calls as well as expense, overtime and salary checks. This department is also responsible for the district Credit Union, work-

ers' compensation claims, insurance, safety and retirement matters.

District 1 conducts cardiopulmonary resuscitation (CPR) and first-aid classes as well as commercial drivers' training for employees. Service award dinners are held each year for employees, and pre-retirement seminars are held every two years. Safety award presentations are held each year for all employees in safety sensitive positions without a lost-time accident. District 1 has had 21 employees selected as MHTD Employee of the Month award-winners.

## DISTRICT 2

District 2, an 8,000-square-mile area in north central Missouri, encompasses 14 counties: Adair, Carroll, Chariton, Grundy, Howard, Linn, Livingston, Macon, Mercer, Putnam, Randolph, Saline, Schuyler and Sullivan. This district contains 3,746 miles of highway, including 24 miles of interstate, 733 miles of primary roads and 2,989 miles of supplementary roads.

Highway activities in District 2 are supervised by the district engineer and eight department heads located at the district's headquarters office in Macon. Each of the departments interact to provide specific areas of expertise for a multi-functional agency for transportation construction and maintenance.

District 2's Design Department is comprised of 33 employees who are responsible for developing plans for highway construction projects throughout the district. The following major projects are currently under design:

- ♦ The relocation of Route 24 in Howard County from Route 87 to 0.7 mile west of Steinmetz.
- ♦ The widening of Route 63 in



## DISTRICT 2 (cont.)

Randolph County to four lanes from north of Moberly to the Boone County line.

- ♦ The widening of Route 65 in Chillicothe to four lanes and adding a continuous center turn lane for 2.1 miles south from 1.4 miles north of Route 190.

- ♦ The widening of Route 36 in Livingston County to four lanes from the Caldwell County line to Chillicothe.

- ♦ The widening of Route 36 in Macon County to four lanes from the Linn County line to 0.6 mile west of Route C.

- ♦ The four-lane bypass of Route 63 around Kirksville from 2 miles north of Route PP to 1 mile south of Route KK.

Three resident engineers, operating from four project offices, manage the district's construction work and 46 employees. Major construction projects in fiscal year '95 included:

- ♦ Replacement of the Missouri River Bridge at Boonville.

- ♦ Construction of a diamond interchange on U. S. Route 36 at Bevier.

- ♦ Resurfacing, shouldering, bridge rehabilitation and culvert extensions on Route 65, north and south of Marshall in Saline County, and Route 65 at Waverly in Lafayette County.

- ♦ Widening, storm drainage, curb and gutter and resurfacing on Route 63 (Baltimore Street) from Route 11 east to Route 6 west in Kirksville.

- ♦ Many smaller bridge and resurfacing jobs.

The main responsibility of District 2's Materials and Research Department is to ensure materials used for highway projects meet department plans and specifications. Duties include inspecting materials from 18 quarries, six sand plants, two fabrication plants and one galvanizing plant. Of the district's 12 Materials and Research Department employees, one

is assigned to the Chillicothe area and two are located in Marshall. In addition to construction materials inspection, the two employees in Marshall are responsible for the quality assurance of fabricated beams and deck panels from Quinn's prestress plant. These beams and deck panels are used on bridges across the state.

The district's Right of Way Department has 11 employees whose duties include acquiring new realty rights, disposing existing rights and leasing department-owned properties.

Eleven maintenance areas with 32 buildings maintain the district's road system. In addition, there are five special crews that handle tasks such as signing, striping, signals and bridge and pavement repair. District 2 has 305 full-time maintenance employees and supplement this work force with temporary part-time employees during the summer months.

The 30 employees in District 2's Equipment and Procurement Department maintain the district's equipment fleet and operate the parts and supplies stockroom. Fifteen of these employees are field mechanics assigned to the district's maintenance buildings.

The district's Human Resources Department consists of two people. This department is responsible for employment, training, employee relations, policy interpretation, internal advancement and equal employment opportunity.

District 2's Fiscal Services Department has 15 employees who provide support services for the district operations. This department is responsible for administrative and accounting processes including office operations, payroll and budget preparation and inventory control. Risk management, which includes workers' compensation, vehicle liability and the employee safety program, is also part of the Fiscal Services Department. This department also handles credit union and



employee insurance services and the maintenance of the district office complex buildings and grounds.

In 1994, District 2 was pleased to be selected as a pilot for the STOP Safety program. The objective of the program is to reinforce safe work practices in an environment conducive to eliminating injuries in the work place by focusing on and correcting unsafe practices. Training employees in STOP practices was completed in late 1994, and the merits of the program are now being evaluated for possible statewide implementation.

## DISTRICT 3

District 3, headquartered in Hannibal, encompasses Audrain, Clark, Knox, Lewis, Lincoln, Marion, Monroe, Montgomery, Pike, Ralls, Scotland, Shelby and Warren counties. The district has 3,371 miles of highways and 423 employees. It also has 10 maintenance subareas, 38 maintenance buildings and three construction resident engineer offices located in Hannibal, Mexico and Frankford.

District 3's construction projects in fiscal year '95 included the following:

- ♦ Route 54, Audrain County – This 6.2-mile, \$902,648 project included bridge rehabilitation and asphalt resurfacing from Boulevard Street in Mexico south to the Callaway County line. It was completed Sept. 8, 1994.

- ♦ Route 54, Audrain County – This 4.7-mile, \$2,785,295 project included subgrading, shouldering, guard rail and concrete pavement for the Mexico bypass. It was completed Dec. 7, 1994.

- ♦ Route 61, Clark County – This 1.3-mile, \$2,940,610 project included bridge replacements, grading, drainage, and asphalt pavement at Fox River and 1 mile

west of Route 136. It was completed Aug. 2, 1994.

- ♦ Route 61, Clark County – This 0.2-mile, \$770,363 project included grading, drainage and asphalt pavement 0.1 mile south of the Iowa state line south 0.3 miles. It was completed Sept. 19, 1994.

- ♦ Route 61, Clark County – This 1.6-mile, \$164,689 project included asphalt resurfacing 0.4 miles south of the Iowa state line south to 0.3 miles north of Route 136. It was completed Aug. 16, 1994.

- ♦ Route 61, Clark County – This 5.2-mile, \$529,113 project included pavement repairs and asphalt resurfacing from 0.3 miles north of Route 136 east to 0.9 miles east of Route 136 Spur. It was completed July 13, 1994.

- ♦ Route 61, Clark and Lewis counties – This 10.9 mile, \$925,138 project included asphalt resurfacing from Route 136 Spur south to Route B north junction in Lewis County. It was completed Aug. 16, 1994.

- ♦ Route 136 Spur, Clark County – This 2.1 mile, \$284,325 project included asphalt resurfacing from Route 136 (Wayland) south to Route 61. It was completed Sept. 15, 1994.

- ♦ Route 15, Knox County – This 0.7-mile, \$1,104,330 project included grading, drainage, replacement of railroad overpass and asphalt pavement from 0.3 miles south of Route 11 south to 2.5 miles west of Route EE. It was completed Dec. 15, 1994.

- ♦ Route 79, Lincoln County – This 19.8-mile, \$1,542,190 project included pavement repairs and asphalt resurfacing 3.4 miles from Pike County line south to 1 mile north of Route C. It was completed Oct. 19, 1994.

- ♦ Route 24, Marion County – This 1.4-mile, \$4,919,215 project includes grading, drainage, concrete pavement and a new bridge over the railroad tracks 0.1 miles west of Mississippi River at West Quincy. At the end of fiscal year 1995, it was 53



## DISTRICT 3 (cont.)

percent complete.

- ♦ Route 24, Marion County – This 2.7-mile, \$4,293,649 project includes grading, drainage, box culverts and concrete pavement from 0.8 miles east of Route 61 Junction to 1.4 miles west of the Mississippi River. At the end of fiscal year '95, it was 7 percent complete.

- ♦ Route 36, Marion County – This 0.8-mile, \$2,057,505 project included grading, drainage, concrete pavement and bridge replacement over the railroad tracks 1 mile west of Route U west of Hannibal. It was completed April 10, 1995.

- ♦ Route 36, Marion County – This 0.1-mile, \$1,962,291 project includes grading, drainage, two bridges, fencing and concrete pavement 0.6 miles east of Route 61 (Central Avenue, Hannibal). At the end of fiscal year '95, it was 86 percent complete.

- ♦ Route 36, Marion County – This 4.6-mile, \$559,068 project included coldmilling, concrete pavement repairs and asphalt resurfacing from Shelby County line east. It was completed July 22, 1994.

- ♦ Route 36, Marion County – This 0.6-mile, \$239,963 project included pavement repairs and asphalt resurfacing from Route N east in Hannibal. It was completed Nov. 4, 1994.

- ♦ Route 61, Marion County – This 1.7-mile, \$738,991 project included coldmilling, non-reinforced concrete pavement and asphalt resurfacing from Route 168 south to 0.1 miles north of Ralls County line. It was completed Dec. 8, 1994.

- ♦ Business Route 61 (Market Street), Marion County – This 1.8-mile, \$745,687 project includes grading, drainage, and asphalt resurfacing from Route 61 to Minnow Branch in Hannibal. At the end of fiscal year '95, it was 0 percent complete.

- ♦ Route 15, Monroe and Audrain counties – This 16.6-mile, \$2,798,604 project in-

cludes widening pavement, resurfacing with asphalt, and rehabilitating bridges from Route D south to Route 22 in Mexico. At the end of fiscal year '95, it was 5 percent complete.

- ♦ Route A, Monroe County – This 0.1-mile, \$383,232 project included grading, drainage, bridge replacement, guard rail and asphalt pavement 0.5 miles south of Route WW (Crooked Creek). It was completed Sept. 10, 1994.

- ♦ Interstate 70, Montgomery County – This 7.2-mile, \$1,191,030 project included coldmilling, pavement repairs and asphalt resurfacing of the westbound lane from 0.6 miles west of Route F in High Hill east to Warren County line. It was completed May 15, 1995.

- ♦ Route 19, Montgomery County – This 0.6-mile, \$1,808,175 project included grading, drainage, two bridges and asphalt pavement from 0.3 miles south of Route J (Mill Creek) and 0.4 miles south of Route Y (Bear Creek). It was completed April 6, 1995.

- ♦ Route 54, Pike County – This 6-mile, \$651,344 project included widening and asphalt resurfacing from 0.1 miles east of Route 154 east to Route U. It was completed July 6, 1994.

- ♦ Route 61, Pike County – This 8.7-mile, \$12,359,693 project includes grading, drainage, box culverts, and bridges from 1.9 south of Frankford to south of Route UU. At the end of fiscal year '95, it was 0 percent complete.

- ♦ Route 61, Pike County – This 4.0-mile, \$1,777,809 project includes grading, drainage, widening shoulders, and asphalt resurfacing on the northbound lanes 1.4 miles north of Route NN to 0.6 mile south of Route HH. At the end of fiscal year '95, it was 5 percent complete.

- ♦ Route 79, Pike County – This 1.1-mile, \$1,059,307 project included grading, drainage, box culvert and asphalt pavement 1.6 miles north of Route H and north



of Annada. It was completed Sept. 9, 1994.

- ♦ Route 79, Pike County – This 0.7-mile, \$673,653 project included grading, drainage, box culvert and asphalt pavement 2.5 miles south of Route W south of Clarksville. It was completed June 15, 1995.

- ♦ Route 19, Ralls and Audrain counties – This 10.5-mile, \$1,853,210 project included asphalt resurfacing from Route 154 north junction south to Route 54 north junction. It was completed Sept. 2, 1994.

- ♦ Route 154, Ralls County – This 5 mile, \$1,596,243 project includes grading, asphalt pavement and replace bridges over Burbridge Creek and Lick Creek west of Perry. At the end of fiscal year '95, it was 2 percent complete.

- ♦ Route J, Ralls County – This 5.1-mile, \$4,439,966 project includes grading, drainage, asphalt pavement from 1.5 miles north of Route BB to Route 154 in Perry. At the end of fiscal year '95, it was 88 percent complete.

- ♦ Route 36, Shelby County – This 2.8-mile, \$290,353 project included asphalt resurfacing 1.6 miles west of Route Z east to Marion County line. It was completed June 23, 1995.

- ♦ Route TT, Shelby County – This 0.2-mile, \$356,681 project includes grading, drainage, asphalt pavement and bridge 3.0 miles south of Route 36. At the end of fiscal year '95, it was 6 percent complete.

- ♦ Interstate 70, Warren County – This 0.3-mile, \$652,604 project includes replacing four ramps with concrete pavement at Route A and B interchange. At the end of fiscal year '95, it was 70 percent complete.

- ♦ Route 47, Warren County – This 0.3-mile, \$1,445,000 project includes grading, drainage, asphalt resurfacing and bridge replacement over Charrette Creek 3.0 miles south of Route N. At the end of fiscal year '95, it was 22 percent complete.

The District 3 Materials and Research

Department is responsible for the inspection of material from 38 quarries, nine sand producers, two mineral-filler producers, three cement plants and two asphalt cement terminals. District 3 inspected 1,819,480 tons of aggregate, 56,508 tons of cement and 3,712,403 gallons of asphalt in 1995.

District 3 also provided inspection at five precast facilities and one prestress plant where temporary barrier curbs, drop inlets, manholes, reinforced concrete pipe, earth panels, prestressed bridge girders, deck panels and box culverts are produced.

A total of 1,228 identification numbers were assigned in fiscal year 1995. This includes general material samples submitted to MHTD's central laboratory for further testing, trial mix material and material reports. Soil survey reports were completed for four construction projects and a total of 19 slide investigations were performed during the fiscal year.

District 3's territory has some unique features including the scenic Great River Road following Route 79 from Hannibal to Old Monroe, and the Lewis and Clark Trail following Route 94 in Warren and Montgomery counties. The Mark Twain Lake and Clarence Cannon Dam are major recreational attractions in District 3.

As of June 30, 1995, District 3 had 377 groups enrolled in Missouri's Adopt-A-Highway program.

## DISTRICT 4

District 4 headquarters, at 5117 E. 31st St. in Kansas City, oversees the highway and transportation system for west central Missouri. The district consists of eight counties: Cass, Clay, Henry, Jackson, Johnson, Lafayette, Platte and Ray. The district has 36 administrative personnel,



## DISTRICT 4 (cont.)

85 design employees, 33 equipment and procurement employees, nine legal employees, 407 maintenance and traffic personnel, 29 materials and research employees, three human resources employees, two risk management employees, one planning employee, one public affairs employee and 18 right of way employees. In fiscal year '95, 111 employees were honored with service awards totaling 1,970 years of service.

The District 4 Maintenance and Traffic Department maintains 2,707.9 miles of roadway, including 202 miles of interstate, 561 miles of primary roads, 1,681 miles of supplementary roads and 265 miles of outer roads. There are 34 maintenance buildings under the supervision of nine area supervisors and six special crews buildings under the supervision of nine special maintenance supervisors.

The Maintenance and Traffic Department administered a total of 78 Adopt-A-Highway permits in District 4. In January 1993, the department started the Motorist Assist Program, a new program that has been very successful. The Motorist Assist crew is housed in a former construction project office.

District 4's Construction Department has seven resident engineer offices. Currently, the district's largest project is Bruce R. Watkins Drive, a 10-mile, \$200 million project scheduled to be completed in 2002.

The district's Design Department has eight squads preparing plans for roadways. This department also prepares all agreements and administers various programs with city and county governments. District 4's Design Department is working with Kansas City government to develop a special project that will include extensive landscaping and aesthetically enhanced bridges for Bruce R. Watkins Drive.

The district's Public Affairs Department has one employee – the community relations coordinator. Public Affairs helps create and shape MHTD messages and works with the metropolitan planning organization, area legislators and the media to provide an accurate report of department activities in the eight-county area. The district's Public Affairs Department also produces news releases, brochures and newsletters for various audiences inside and outside the department.

Since the federal government's passage of the Intermodal Surface Transportation and Efficiency Act of 1991, District 4's Planning Department has worked closely with the local metropolitan planning organization, Mid-America Regional Council (MARC), to better coordinate MHTD activities within the Kansas City metropolitan area. The department is working to improve the coordination of these activities in the eight-county area by working with MARC to implement the plan-scoping process developed by the Mercury Team.

The Planning Department also coordinates the annual development of the district's right of way and construction program. Right of way valued at nearly \$3,094,184 was acquired during fiscal year '95, and \$439,644 in relocation benefits were paid to parties affected by district projects. In conjunction, property management totals were \$132,738.94.

Employees in the district's Materials and Research Department inspect materials used in construction and maintenance programs to ensure quality materials are used. They also provide inspection of materials for other districts.

The District Counsel's Office is comprised of a district counsel, a senior assistant counsel, two assistant counsels, one paralegal and three legal secretaries. The office is responsible for preparing, filing and defending cases on behalf of the



Highway and Transportation Commission in the 20 county circuit courts in districts 4 and 1.

The District Counsel's Office manages approximately 175 court cases each fiscal year. The types of cases handled by the office include condemnation, workers' compensation, general liability, fleet vehicle liability, property damage, inverse condemnation and various miscellaneous cases. During the 1995 fiscal year, the district counsel and assistant counsels argued four appeals, wrote two briefs and had one appeal dismissed and handled five inverse condemnation cases and two miscellaneous cases. In addition, the office filed six condemnation petitions for a total of 44 tracts and filed three miscellaneous case petitions, settled three condemnation tracts and six condemnation tracts upon pre-condemnation review, and had one administrative settlement. The district counsel's staff settled 12 workers' compensation cases, one fleet liability case and four general liability cases. The staff also tried eight condemnation cases, two fleet liability cases and two workers' compensation cases in addition to working on files established prior to fiscal year '95.

District 4's Human Resources and Fiscal Services departments provide valuable support services for the district. The Human Resources Department provides primary staff and general support for more than 700 district personnel. This support includes counseling, staffing, policy interpretation, Equal Employment Opportunity and Affirmative Action monitoring, controlled substance testing, career counseling, training and other services.

The district has 820 pieces of equipment that are maintained by 18 field mechanics, five shop mechanics and two mechanic helpers.

The Fiscal Services Department is responsible for the accounting and risk management operations at the district level.

Accounting operations include salary payroll, commercial payments, inventories, employee benefits including medical and life insurance, the credit union and retirement. Risk management operations include workers' compensation, general liability claims, property damage recovery, the first-aid program and safety. In fiscal year '95, District 4's American Red Cross Standard First-Aid Program trained or recertified 250 employees in the skills of first aid and adult CPR.

## DISTRICT 5

Within District 5's 7,787 square miles there are 13 counties: Benton, Boone, Callaway, Cole, Camden, Cooper, Gasconade, Maries, Miller, Moniteau, Morgan, Osage and Pettis. Within these counties lie the Lake of the Ozarks area and the cities of Sedalia, Columbia and Jefferson City. The district oversees 78 interstate miles, 819 miles of primary system highways and 2,558 miles of supplementary system roads.

The district has approximately 523 employees in eight departments: fiscal services, legal, equipment and procurement, maintenance and traffic, construction, design, right of way, and materials and research. There are 11 maintenance areas, 43 sub-area buildings, six special crews and four construction project offices.

As of June 30, 1995, District 5's Adopt-A-Highway program included 686 adoptions (second among the state's 10 districts) covering approximately 1,100 miles.

Major construction projects in District 5 for fiscal year 1995 included:

- ♦ Route 65, Benton County - This 9.8-mile project included coldmilling, pavement repair and resurfacing with asphalt concrete 0.2 mile south of Route MM to



## DISTRICT 5 (cont.)

the Hickory County line.

- ♦ Route TT, Boone County – This 1.6-mile project included construction of a box culvert bridge, box culvert and widening to four 12-foot lanes from Fairview Road to south of Smith Drive in Columbia.

- ♦ Route 124, Boone County – This 0.69-mile project included grading, bridges and pavement from Route 22 to one-half mile south of Route 22 in Centralia.

- ♦ I-70, Boone County – This 4.5-mile project included pavement repair and asphalt concrete resurfacing on northbound lanes from Route 740 to 3.4 miles west of Route Z.

- ♦ Route 63, Boone County – This 7.85-mile project included cold milling, pavement repair and resurfacing with asphalt concrete from the Randolph County line to the Route 124 north junction.

- ♦ Route 740, Boone County – This project included pavement widening, drainage and signal revisions at the Route 763 intersection in Columbia.

- ♦ Route 63, Boone County – This 7.8-mile project included adding a lane from Route 124 north junction to Wagon Trail Road.

- ♦ Route WW, Boone County – This project included replacing two box culverts along with two sections of pavement east of Columbia.

- ♦ I-70, Boone County – This project included 24-foot asphaltic concrete resurfacing of the westbound lane from Route 63 in Columbia to 1.8 miles west of Route Z.

- ♦ I-70, Boone and Cooper counties – This project involved replacing the bridge deck and repainting the Missouri River bridge at Rocheport.

- ♦ Route 54, Callaway County – This 18.8-mile project involved adding a lane from Route 54 business junction north of Fulton to 0.6 mile north of Route OO.

- ♦ Route 7, Camden County – This

project involved replacing the bridge over Dry Auglaize Creek.

- ♦ Route 54, Camden County – This project entailed widening Route 54 to five lanes west of Route KK to east of the Grand Glaize Bridge.

- ♦ Route 54, Camden County – The project involved bridge construction over the Grand Glaize arm of the Lake of the Ozarks.

- ♦ Route 54, Camden County – This project included the grading, drainage and widening of the pavement at Grand Glaize Bridge in the Lake of Ozarks in Osage Beach.

- ♦ Route C, Cole County – This project entailed the 24-foot asphaltic concrete relocation between Russellville and west of Route D.

- ♦ Route 50/63, Cole County – This 0.6-mile project involved grading, drainage, bridges, pavement, signals and signing at Eastland Drive in Jefferson City.

- ♦ Route 100, Gasconade County – This 0.3-mile project included rock removal and paving 0.6 mile east of Route 19 at Hermann.

- ♦ Route 63, Osage and Maries counties – This 14.4-mile project entailed shaping shoulders, cold milling, pavement repair and resurfacing with asphaltic concrete from Route P in Freeburg to 1.5 miles north of the Gasconade River.

## DISTRICT 6

District 6, headquartered in Chesterfield, has approximately 850 employees working in 11 departments: Fiscal Services, District Counsel, Equipment and Procurement, Maintenance and Traffic, Construction, Materials and Research, Design, Right of Way, Planning, Public Affairs and



Human Resources. The district includes the city of St. Louis and the counties of St. Louis, St. Charles, Franklin and Jefferson.

The district values customer service and strives to deliver excellent customer service in all activities. District employees speak with local students, area businesses, governmental agencies and service organizations to keep them updated on department operations. The district also works very closely with the East-West Gateway Coordinating Council, a metropolitan planning organization, and Bi-State Development Agency, the local transit provider, to plan for the best transportation system for St. Louis.

District 6 is responsible for maintaining 1,507 miles of roadway. The Maintenance and Traffic Department includes 24 maintenance buildings supervised by nine area supervisors. An additional 11 supervisors oversee operations such as signals, lighting, striping, signing, bridge repairs, landscape and special repairs. District 6 is responsible for 710 signal installations, about 50 percent of the statewide total.

The department's Motorist Assist program, which began in February 1993, helps motorists stranded on area highways and helps prevent these incidents from causing traffic problems. The program operates 16 hours per day, five days a week. From July 1, 1994, through June 30, 1995, Motorist Assist drivers responded to 12,362 incidents of stalled or abandoned vehicles. Because of the many benefits of this program and the increasing demand for it, the district plans to expand the service area and number of employees involved in the program in fiscal year 1996.

The District 6 Construction Department has nine project offices staffed by approximately 160 engineers and technicians. During the past year, this department has been working on several major projects. The district's Construction

Department uses partnering, a teamwork approach, to ensure these major projects are completed on schedule or, in many cases, ahead of schedule. Partnering is an arrangement in which the contractor and MHTD employees agree to work together to address problems that arise during project construction. The district has partnered 20 projects totaling \$208 million and is beginning to include municipal officials and utility companies in the partnerships. The results include \$2 million in project savings, early completion, better quality and increased emphasis on safety and communication.

An example of a partnering project is the reconstruction of the Interstate 55 and Lindbergh Boulevard interchange in south St. Louis County. The improvement, which was started in fiscal year 1995 and completed in fiscal year 1996, included converting the diamond interchange to a single-point interchange. Because of partnering efforts, this \$20 million project was completed under budget and two months early. In recognition of their partnering efforts on this project, the district received two awards – a Reader's Choice Award from *St. Louis Construction News & Review* magazine and the Marvin Black Award for Excellence in Partnering from the Association of General Contractors of America.

Work progressed on widening and rehabilitating I-55 over the Meramec River between St. Louis and Jefferson counties. Partnering has helped this project move along several months ahead of schedule in spite of delays early in the project due to an endangered species found in the Meramec River.

The Route 370 extension project involved some very unusual work in fiscal year '95. Approximately 3 million cubic yards of sand fill were pumped from the Mississippi River to the project site, a 7-mile trip. The fill was dredged from the



## DISTRICT 6 (cont.)

river and pumped through a hydraulic pump system for five months. This process was much faster and less costly than hauling the fill in trucks to the site. Also in fiscal year '95, the eight projects, totaling \$44.6 million, on Route 370 were under contract. Route 370 is on schedule to open to Truman Road in early fiscal year '97 and to Interstate 70 in fiscal year '98.

Work was finished adding lanes to Interstate 270 from Interstate 44 to I-55. This project will help the increasing traffic volumes on this portion of I-270. The district also finished a project to add lanes to Clayton Road (Route HH) in Ballwin.

A major step forward on the Page Avenue project came in late fiscal year '95. MHTD received approval on the project from the U.S. Department of Interior and Parks Department, and the Record of Decision from the U.S. Corps of Engineers. These approvals allowed District 6 design engineers to begin work designing the Page Avenue extension. The first construction project is scheduled to begin in fiscal year '97.

The district's Design Department began a new planning process known as Major Transportation Investment Analysis (MTIA). This process looks at the transportation problems in an area or corridor and determines what are the best solutions to solve those transportation problems. In this process, the district works together with Bi-State and East-West Gateway and includes other federal and state agencies in on the decision-making process. In fiscal year '95, District 6 began MTIA studies on Route 21 and I-55 in Jefferson County and on the Cross-County Corridor, which includes all of Interstate 170 and Interstate 64/Route 40 from Spoede to Vandeventer.

## DISTRICT 7

District 7, headquartered in Joplin, encompasses 11 counties: Barry, Barton, Bates, Cedar, Dade, Jasper, Lawrence, McDonald, Newton, St. Clair and Vernon. The district maintains 3,358 miles of highway including 60 miles of interstate, 753 miles of primary roads and 2,545 miles of supplementary roads.

The district has 37 maintenance buildings and three resident engineer offices located in Neosho, Carthage and Nevada. District 7 has 441 full-time employees: 17 Administrative, 40 Construction, 25 Equipment and Procurement, 292 Maintenance and Traffic, 10 Materials and Research, 12 Right of Way, and 47 Design. Approximately 56 temporary employees and 29 summer students were employed during 1994 and 1995.

In fiscal year '95, the district's striping crew operated two water-based acrylic stripers and completed 6,321 miles of striping. This included 3,523 miles of centerline and no-passing zone striping and 2,798 miles of edge-line striping. An additional 477 miles of no-passing zones and 50 miles of edge-lines were added to the striping program to improve safety.

In fiscal year '95, the district sign crew and maintenance buildings maintained more than 44,000 signs, including approximately 18,500 signs on lettered routes, 16,500 on primary routes and 9,500 on supplemental routes. All signs are inspected annually.

Permit inspectors issued 1,140 permits: 72 for commercial entrances, 336 for private entrances and 732 for excavation permits.

The major construction projects completed in District 7 during the period July 1, 1994 to June 30, 1995 were as follows:

### **Barry County**

- ♦ Added left turn lanes and turning radii improvements at the intersection of



Route W and Route 37.

- ♦ Graded and resurfaced 2.9 miles of Route 60 from the Newton County line east to Route 97.

- ♦ Resurfaced 16.6 miles of roadway with asphalt at various locations (surface leveling program).

#### **Bates County**

- ♦ Resurfaced 17.6 miles of roadway with asphalt at various locations (surface leveling program).

#### **Cedar County**

- ♦ Grading, paving and the addition of a left turn lane on 0.9 mile of Route 82 in El Dorado Springs.

#### **Dade County**

- ♦ Replaced bridge over Maze Creek on Route 245, 1.8 miles south of Route 215.

- ♦ Strengthened the bridge over Jordan Creek on Route K, 2.4 miles west of Route M.

- ♦ Strengthened the bridge over Turnback Creek on Route K, 3.0 miles east of Route 39.

- ♦ Strengthened the bridge over Turnback Creek on Route O, 1.3 miles south of Route 160.

#### **Jasper County**

- ♦ Constructed the remaining portion of a diamond interchange and relocated the west outer road at the intersection of Route HH and Route 71A at Carthage.

- ♦ Placed concrete pavement for the interchange at the intersection of Route I-44 and the new relocation of Route 71.

- ♦ Resurfaced 5.1 miles of the eastbound lanes and rehabilitated two bridges on Route I-44 from 1.5 miles east of Route 37 to 0.5 miles east of the Lawrence County line.

- ♦ Resurfaced 5.3 miles of roadway with asphalt at various locations (surface leveling program).

#### **Lawrence County**

- ♦ Resurfaced 10.9 miles of roadway with asphalt at various locations (surface leveling program).

#### **McDonald County**

- ♦ Resurfaced 47.2 miles of roadway with asphalt at various locations (surface leveling program).

#### **Newton County**

- ♦ Graded and resurfaced 3 miles of Route 60 from the Barry County line west.

- ♦ Repaired and resurfaced 2.4 miles of Route 43 from 0.3 mile south of Route I-44 to Route C.

- ♦ Strengthened the bridge over Middle Indian Creek on Route O, 0.3 mile south of Route HH.

- ♦ Completed the grading and bridges for the relocation of 6 miles of Route 71 from Route FF to existing Route 71.

- ♦ Widened six bridges on Route I-44 from the Oklahoma state line to the Jasper County line.

- ♦ Placed concrete pavement for the interchange at the intersection of Route FF and the new relocation of Route 71.

- ♦ Grading, paving and replacement of the bridge over Lost Creek on Route K, 4.1 miles east of Seneca.

#### **St. Clair County**

- ♦ Resurfaced 22.7 miles of roadway with asphalt at various locations (surface leveling program).

#### **Vernon County**

- ♦ Strengthened the bridge over West Fork Clear Creek on Route K, 2 miles east of Route 71.

- ♦ Resurfaced 5.6 miles of Route 54 from 1.6 miles east of Route H to 1 mile west of Route BB.

- ♦ Resurfaced the northbound lane of Route 71 from 2.5 miles south of Route 54 to 1 mile south of Route DD.

- ♦ Resurfaced 6.8 miles of roadway with asphalt at various locations (surface leveling program).

As of June 30, 1995, District 7 had 501 Adopt-A-Highway groups volunteering litter pickup, mowing and beautification efforts on 789 miles in the district.

District 7's Materials Department



## DISTRICT 7 (cont.)

inspects all materials used in constructing and maintaining highways to ensure compliance with specifications. The district inspects more than 1,678,540 tons of aggregate, 178,858 tons of cement and 21,384,470 gallons of asphalt. The Materials Department also inspects plain and epoxy-coated reinforcing steel and dowel bars, galvanizing of steel signal and lighting poles, sodium and calcium chloride, glass beads, concrete pipe, precast concrete box culverts, oil, grease and anti-freeze. It also performs soil surveys, condition surveys and bridge foundation investigations to use in highway and bridge design.

## DISTRICT 8

District 8, headquartered in Springfield, encompasses a 12-county area with 3,648 miles of state highways. To the north, the district includes the Pomme De Terre Lake area in Hickory County. To the east are Laclede, Webster, Wright and Douglas counties, including the cities of Lebanon, Mountain Grove and Ava. District 8 runs south to the Arkansas state line and west to the Lawrence County line. This area includes the Ozark Mountain region, home of Branson and the Table Rock Lake area.

The Ozark Mountain region is southwest Missouri's leading tourist attraction with the Branson area expecting more than six million tourists this year. District 8's main metropolitan area is Springfield with a population of approximately 150,000.

The department has 480 employees in District 8, most of whom work out of 39

maintenance buildings throughout the district and three construction project offices in Springfield, Buffalo and Branson.

The District 8 Design Department has been busy preparing plans on Route 65 north of Branson. The district has also worked with the consultant on the Ozark Mountain High Road, Route 248 in Branson and Route 65 between the Christian County line and Route F north of Branson. Projects in the Springfield area have included Route H north of Springfield at Crystal Cave, Route I-44 resurfacing, Route 60 resurfacing, five signal interconnect projects, and the interchange revision at Strafford.

Also in the Springfield area, construction continues on the James River Freeway between Kansas Expressway and existing Route 60 west of Springfield. Major portions of the paving are complete, and finish work (signals, signing, etc.) is expected to be completed in the spring of 1996.

Other major construction projects are as follows:

- ♦ Interstate 44, Greene County
- ♦ Route FF, Greene County
- ♦ Route 32, Dallas County
- ♦ Route 65, Taney County
- ♦ Route 248, Taney County
- ♦ Route 465, Taney County

The Adopt-A-Highway program continues to be a great success in the Ozark region. As of June 30, 1995, 623 groups had adopted portions of District 8's highways through the program.

Work continues on the Growing Together projects in the district. Growing Together is a cooperative beautification program between the department and state and local governments, civic groups or others. The district's roadside enhancement crew has won various awards for flower, shrub and tree planting projects. The crew has helped beautify Ozark roadsides by planting flowers and trees to be viewed by the traveling public.



## DISTRICT 9

District 9, headquartered in Willow Springs, is a 13-county region encompassing Carter, Crawford, Dent, Howell, Iron, Oregon, Pulaski, Phelps, Ripley, Reynolds, Shannon, Texas and Washington counties. District 9, the largest district in the state, has 3,726 miles of roadway: 78.5 miles of interstate, 1,048 miles of primary routes and 2,599 miles of supplementary routes. These routes are maintained by an office staff of 11 and 285 field personnel from 36 maintenance buildings and three special crew buildings in 11 sub-areas.

The Adopt-A-Highway program has become increasingly popular in District 9 with 350 groups signed up as of Nov. 30, 1995.

The Construction Department in District 9 had 45 full-time and seven part-time employees in 1995. The following major projects were completed in fiscal year '95:

- ♦ Resurfacing 8 miles of Route 63 between Route 60 and Route N in Howell County.
- ♦ Widening and stabilizing shoulders on 7 miles of Route 160 in Ripley County.
- ♦ Widening and resurfacing 2 miles of Route 63 in Rolla, in Phelps County.
- ♦ Resurfacing 3 miles of Interstate 44 in Crawford and Franklin counties.
- ♦ Rebuilding 5 miles of I-44 westbound lane in Crawford County.
- ♦ Various asphalt overlays throughout the district.

During fiscal year 1995, District 9's Right of Way Department had 10 employees. They acquired right of way for highway construction totaling \$2,076,538. This included 159 parcels - 141 by negotiation settlement and 18 by condemnation, or 89 percent by negotiation and 11 percent by condemnation. The Right of Way Department also purchased two maintenance lots and a project office for the Construction Department, totaling \$241,100.

Sixty-six relocation claims were processed under the Relocation Assistance and Payment Program with payments totaling \$263,895 to assist displaced families in fiscal year 1995.

In addition, the Right of Way Department obtained appraisals on 133 parcels. Receipts from rental property acquired for future construction and from the sale of right of way and facilities no longer needed for state highway purposes totaled \$15,550.

As of November 1995, District 9's Design Department had 31 employees doing design work on 23 of the 42 projects listed in the Short-Term Action Plan (STAP). The remaining 19 projects either have the design work completed or have been let. The department is currently working on 21 other projects to be built beyond 1998. Consultants are handling four projects for District 9. Major design emphasis has been on Route 63 between Willow Springs and West Plains and on Route 72 between Rolla and Salem. Major planning and location studies are in progress on the Route 60 Corridor east of Willow Springs to Poplar Bluff, Route 63 north of Cabool and Route 60/63 in the Willow Springs area. A major location and environmental study, by a consultant, will soon be starting in the Rolla area.

The district's Fiscal Services Department has 10 office personnel and three maintenance personnel. They handle payment of payrolls and commercial and equipment invoices. They're also responsible for daily and monthly reports from the maintenance buildings and construction offices. Further responsibilities include life and health insurance, workers' compensation, the credit union, building maintenance and district correspondence.

District 9's Equipment Department has 31 employees: 18 field mechanics and helpers, nine shop personnel and four stockroom employees. In the 13-county



## DISTRICT 9 (cont.)

district, they take care of 553 units including 45 cars, 54 pickups and carryalls, 190 trucks, 87 tractors, 43 loaders, 36 distributors, 47 motorgraders and 51 other units. The stockroom personnel oversee a parts and supplies inventory of \$252,848 and have an average monthly sale of \$31,000.

The district's Materials and Research Department has 11 employees who are responsible for inspecting 38 quarries, 140 gravel and sand sources and 14 ready-mix plants. In fiscal year 1995, they inspected 957,830 tons of aggregate including 872,067 tons of crushed stone, 63,083 tons of gravel, 20,220 tons of sand and 2,460 tons of porphyry. Many other materials, such as calcium chloride, sodium chloride, paint, corrugated metal pipe and reinforced concrete pipe, were also inspected.

District 9's Human Resources Department assists district employees in the administration of department policies, procedures and activities. Specific functions include the employment, recruiting and hiring process, career development and counseling, disciplinary and grievance procedures, Equal Employment Opportunity and affirmative action, personnel records, drug testing and pre-employment physicals, investigations, Americans with Disabilities and other disability administration.

Records in the district's Human Resources Department show 64 drug tests were conducted, 48 physicals were given and the random drug testing program was implemented in fiscal year '95. The district received 98 job vacancy announcements, and 586 employment applications were processed. During the spring, 72 seasonal employees were hired for summer work. Of these, 32 were temporary hires and 31 were students, nine of whom were interns. There were 14 new employees

permanently hired and four transferred to District 9.

District 9 has had four Employees of the Month. Bob Woodring, district highway design engineer, was honored in October 1983; Steve Hutchinson, field mechanic, was the May 1986 Employee of the Month; Dave Smith, senior highway designer, was honored in November 1991; and Mary Hodo, administrative secretary, was the September 1993 honoree.

The implementation of the freight mail system has been a valuable asset and proof of positive results from the district's quality improvement process.

## DISTRICT 10

District 10 encompasses the 14 counties of Scott, New Madrid, Mississippi, Pemiscot, Dunklin, Butler, Wayne, Stoddard, Bollinger, Cape Girardeau, Madison, Perry, Ste. Genevieve and St. Francois. The Naylor Maintenance Building in Ripley County is also part of District 10. The district, an area of 7,984 square miles in southeast Missouri, includes 3,858 miles of roadway.

In fiscal year 1995, District 10 employed 533 full-time salaried employees. During fiscal year 1995, 18 employees retired, and 36 permanent employees were hired. In addition, the district hired 36 college students and 43 seasonal maintenance workers.

The District 10 Highway and Transportation Employees' Credit Union, managed by the district personnel services agent, provides financial services to state Highway Patrol and Highway and Transportation Department employees. Credit union membership in fiscal year 1995 was 1,102 with total assets of \$5,983,635. The



credit union processed 439 loans totaling \$2,098,086.79.

The district's Fiscal Services Department processed about 9,024 checks to suppliers; checked and extended totals on more than 11,570 daily crew reports; added more than 786 items to the tool inventory; took inventory at 36 maintenance buildings, five resident engineer offices and the district office; and verified 3,555 pieces of equipment were in service and tagged properly. In addition, material, petroleum and capital investment inventory was taken at all maintenance buildings. The Fiscal Services Department also processed commercial invoices, physical inventories and usage reports for 957,000 gallons of petroleum products.

This department processed 191 property damage claims, 112 auto liability claims and 82 new workers' compensation claims. In addition, the Fiscal Services Department issued 667 overdimension permits from June 1994 to July 1995.

Since February 1994, the district Right of Way Department annex has been located at 335 N. Main in Sikeston, across the street from the district office. During fiscal year 1995, the Right of Way Department's 12 employees acquired 63 parcels, of which 50 were negotiated and 13 were condemned. There were 13 active projects, 101 staff appraisals and 16 fee appraisals performed during this period. The appraising staff also completed other duties such as fee studies, updating appraisals, special project appraisals, entrance widening appraisals and excess land appraisals.

Other Right of Way activity included completing acquisition and relocation for the Cape Girardeau Bridge, starting the acquisition and relocation process for the Route 67 bypass in Butler County, and completing several small projects around the district. Leases and relinquishments on excess parcels of land were accom-

plished as well as changes of access. One employee presents requests for disposal to the Excess Land Committee in this district.

Employees in the Right of Way Department participated in several other District 10 activities including Red Cross, awards and recognitions team, safety committee, concession team, facilitator team, communication team, credit union officer, state employees charitable campaign, and public involvement team.

The District 10 Materials and Research Department is responsible for the quality assurance of products and materials used by the Missouri Highway and Transportation Department. To fulfill this responsibility, inspectors are required to travel throughout the district's 14 counties and the four surrounding states — Arkansas, Tennessee, Kentucky and Illinois.

District 10's Design Department prepares detailed construction plans for a wide variety of the district's construction projects. Design has approximately 52 employees with five design groups and two field survey crews. The 1995 fiscal year saw a shift in work priorities with the implementation of the Short-Term Action Plan. However, the Design Department continues to focus efforts on big projects such as the four-laning of Route 60 between Sikeston and Poplar Bluff, the Route 74 Mississippi River Bridge project and the Nash Road extension to the Southeast Missouri Port Authority.

Seventeen projects totaling more than \$36 million were completed and submitted for bidding during fiscal year 1995, all of which have been awarded for construction.

The programs coordinated by the district liaison engineer, during fiscal year 1995, included the review of the Off-System Bridge Replacement Program, the Surface Transportation Program and the Enhancement Funds Program. More than



## DISTRICT 10 (cont.)

\$2 million was obligated for the construction of nine off-system bridge projects and the engineering on four additional projects. There was \$487,725 obligated for the construction and engineering on two Surface Transportation Program projects and \$745,826 obligated for enhancement projects.

District 10's Construction Department consists of five resident engineer offices totaling 67 employees and two district office employees. During fiscal year 1995, 50 projects were awarded totaling approximately \$50 million. Some of the district's major projects included:

- ♦ The pavement repair and resurfacing of Route 67 in St. Francois County.
- ♦ Grading, bridge construction and concrete paving on Route 60 in Stoddard, New Madrid and Butler counties.
- ♦ The relocation of Route 74, new construction of Route AB (the port authority road), and the addition of three lanes to the existing Route K bridge in Cape Girardeau County.
- ♦ The Route D Port Authority project and bridge replacements with asphalt pavement on routes 164 and H in Pemiscot County. Major grading is taking place on the new Interstate 155/Route 412 interchange at Interstate 55.
- ♦ Route 62 in New Madrid County has received major bridge construction work.
- ♦ Major resurfacing on Route 25 at Advance in Stoddard County.
- ♦ Repaired flood damage on Interstate 57, Mississippi County.
- ♦ Completion of 145 miles of contract surface leveling.

The district's Maintenance and Traffic Department personnel resurfaced approximately 185 miles of roadway with a cold mix leveling course. Contractors resurfaced 144 miles of highway with one-inch, machine-laid hot mix. District 10

used more than 50,000 cubic yards of mix to patch and make routine surface repairs, and mowed more than 55,000 acres of right of way. In addition, maintenance crews replaced 20,000 linear feet of pipe, worked more than 14,000 hours on snow and ice control and performed approximately 200 miles of ditch clean out. Traffic employees installed five new signals during the fiscal year and maintained 75 signals across the district. There are also 420 mobile radios within the district's communication system, which the signal crew maintains.

The district's permit section issued approximately 1,170 excavation permits and 108 billboard permits. District 10 contains more than 1,400 permitted billboards, which are administered and renewed annually.

District 10 administers the Adopt-A-Highway program in the southeast region. As of June 30, 1995, 460 groups had adopted 836 miles of highway through the program.

The district's Equipment and Procurement Department maintains and repairs more than 700 pieces of equipment. In addition to general equipment maintenance, there have been several equipment modifications implemented. The district purchased five International crew cabs, one four-wheel drive loader, two motorgraders, one paint striper, 18 pickup trucks, 14 passenger cars and two mini vans during fiscal year 1995.

Out of concern for the health and welfare of its employees, District 10 held cardiopulmonary resuscitation (CPR) and first-aid training sessions sponsored by the American Red Cross. During 1995, the Red Cross team implemented F.A.S.T. Week (First Aid Safety Training) to re-emphasize the importance of first-aid training. Twenty natural work units that were 100 percent certified and passed a F.A.S.T. inspection received lunch and a sign for their building. District 10 has 60 percent of its employees first-aid certified.



# THE DIVISIONS

## Audit and Business Analysis

In MHTD's cost accounting systems, the Audit and Business Analysis Division has three responsibilities : 1) conducting operational reviews, 2) auditing invoices and 3) analyzing accounting systems and developing procedures.

The first area encompasses operational reviews at the division and district level in activities such as construction, right of way, preliminary engineering, administration, financial management, information systems, planning and transportation. These reviews determine if division and district operations comply with published department procedures and state and federal regulations including the economy and efficiency of the operations. This ensures the integrity of developed and incurred costs.

The division's second area of responsibility involves auditing final invoices for utility and railroad relocations, Federal Aid Urban (FAU) projects, Bridge Replacement Off-systems (BRO) projects, transportation grants and miscellaneous billings to the department.

The Audit and Business Analysis Division's third area of responsibility includes analysis of the department's accounting systems and the development of written operating and coding procedures.

### AUDIT TOTALS JULY 1, 1994 TO JUNE 30, 1995:

Utilities	55	\$4,638,328.43
Railroads	54	3,652,335.98
Federal Aid Urban	13	15,675,264.89
Bridge Replacement		
Off-System	53	11,724,331.77
Miscellaneous	27	8,977,905.90
Pre-Audit Contract		
Reviews	198	45,259,108.33
	400	\$89,927,275.30

## Bridge

The MHTD Bridge Division is responsible for providing quality and cost-effective engineering plans for the state highway system bridges, safety assurance and engineering services.

The engineered plans include design, special construction provisions and estimating costs. The safety assurance includes fabrication inspection, maintenance of the National Bridge Inventory for state and locally owned bridges, and coordinating the inspection of locally owned bridges. Additional engineering services include providing quality assurance review of engineered bridge plans for local agencies through the Highway Bridge Replacement and Rehabilitation Program (HBRRP) and the Surface Transportation Program (STP). The division also serves as a liaison with universities and consulting engineers on research projects.

During fiscal year 1995, the division designed 148 new bridges and retaining walls for letting. Of this total, 129 were designed for major system routes and 19 for supplementary routes.

The combined length of new structures contracted during the fiscal year was 27,318 feet at a cost of \$78,312,073. Of this total, 4,001 feet were contracted at a cost of \$9,505,542 for the supplementary system.

In addition to the new structure designs, 91 designs were contracted for repairing, extending or widening 27,135 feet of existing bridges at a cost of \$9,563,104.

Shop drawing checkers approved and distributed 308 sets of shop drawings, and fabrication inspectors made 206 trips to 21 steel shops to inspect bridge steel.



## Bridge (cont.)

The Bridge Division worked with consulting engineering firms on 28 bridge projects, five of which were major bridges.

The division performed load ratings for all of the fiscal year's new or rehabilitated bridges and 260 locally owned bridges. The Bridge Division also coordinated inspection of more than 6,700 locally owned bridges to assure compliance with the National Bridge Inspection Standards. In addition, the division administered the Bridge Engineering Assistance Program, which provided recommendations for repair of more than 95 locally owned bridges.

Personnel within the division provided local agencies with assurance review on 68 bridges for program eligibility, 133 sets of conceptual bridge plans and 202 sets of final bridge plans. There were 53 locally owned structures awarded for contract at a cost of \$21,919,417, six of which were major systems at a cost of \$10,196,666.

The Bridge Division was also involved in five research projects, including a study on bridge deck drain design criteria. Projects on bridge painting and fiber reinforced plastic reinforcing bars were also initiated, along with two additional ongoing projects.

Work began this year on the following major structures: a new toll bridge over Lake of the Ozarks, a bridge on Page Avenue over Creve Coeur Lake in St. Louis, and three bridges over the Mississippi River - Page Avenue in St. Louis, Route 74 in Cape Girardeau and US 36 in Hannibal.

## Chief Counsel's Office

The Chief Counsel's Office is headquartered at the Central Support Center in Jefferson City and has five district counsel offices located in Kansas City, Jefferson City, Chesterfield, Springfield and Sikeston. The division is made up of 32 attorneys and 45 support staff for a total staff of 77.

As of June 30, 1995, the Chief Counsel's Office had a caseload of 496 cases and 433 Highway and Transportation Commission and other agency administrative proceedings for a total of 929 open files.

### **Condemnation Cases**

Disposition was effected in 100 cases, and 154 exceptions were filed. There were 27 jury trials reported. The sum of \$2,259,552 was collected on final judgments where a return from the commissioners' award was due the commission.

Inverse Condemnation - Four cases were filed against the commission, and four cases were closed.

### **Administrative Hearings**

Outdoor Advertising - There were six hearings conducted involving six signs.

Utility Relocation - One hearing was held.

Relocation Assistance - No hearings were held.

### **Highway Beautification Cases**

Outdoor Advertising - Three cases were opened; eight cases were closed.

Junkyard Cases - Two cases were opened; three cases were closed.

### **Risk Management Cases**

General Liability - Fifty-one cases were filed against the commission, and 53 cases were closed. There were seven jury trials reported.

Fleet Vehicle Liability - Seventeen cases were filed against the commission,



and 14 cases were closed. There were five jury trials reported.

**Property Damage** – Four cases were filed by the commission, and two cases were closed.

**Workers' Compensation Cases** – There were 236 claims filed with the Missouri Division of Workers' Compensation, and 205 claims were closed.

**Workers' Compensation Subrogation Cases** – Seven cases were filed by the commission, and eight cases were closed.

#### **Contractor Cases**

Ten cases were filed against the commission, and four cases were closed.

#### **Miscellaneous Cases**

Fourteen cases were filed against the commission, and nine cases were closed.

#### **Employment Cases**

Six cases were filed against the commission, and no cases were closed.

#### **Retirement Board Cases**

No cases were filed against the commission, and no files were closed.

#### **Medical Insurance Plan Cases**

No cases were filed against the commission, and no cases were closed.

#### **Annexation Cases**

One case was filed against the commission, and five cases were closed.

#### **Other Agency Claims**

**Employment Security Appeals** – No claims were filed against the commission, and no claims were closed.

**Equal Employment Opportunity claims** – Eight claims were filed against the commission, and three claims were closed.

**Missouri Commission on Human Rights claims** – Six claims were filed against the commission, and three claims were closed.

**EPA/DNR claims** – No claims were filed against the commission, and no claims were closed.

#### **Miscellaneous**

Numerous contracts were prepared

and reviewed, legislative bills drafted and reviewed, and legal opinions rendered.

## **Construction**

The Construction Division is responsible for administering MHTD's construction contracts. After the Highway and Transportation Commission awards construction work, a notice to proceed, which establishes contract finances, is issued to each successful contractor. Construction Division personnel inspect each project so the department is aware of construction progress.

During fiscal year 1995, construction work was active in the following areas: interstates 44, 55, 70 and 270, and routes 141 and 370 in the St. Louis area; interstates 35, 70 and 435, and routes 71 and 291 in the Kansas City area; Interstate 44 in the Crawford County area; Interstate 70 and Route 63 in the Boone County area; and Route 65 in the Saline County area.

Interstate system contracts included upgrading existing dual-lane highways to interstate standards and implementing the latest safety features. About 139 miles of interstate highways are being upgraded to the latest safety standards.

The Construction Division administered the construction or reconstruction of approximately 1,773 miles of roadway during fiscal year '95. The division administers the Off-System Bridge Repair and Surface Transportation programs, both of which increased during the fiscal year.

Primary and supplementary system contracts involved rural and urban construction including new construction, widening and resurfacing projects as well as bridge rehabilitation. Projects were financed with a combination of federal-aid and state funds.



## Construction (cont.)

The Construction Division continues to seek and certify minority and women contractors to help meet the goals of the Disadvantaged Business Enterprise (DBE) program. Bidders on construction projects are obligated to take Affirmative Action in using DBEs. Through affirmative action efforts, \$46,249,234 in contracts and subcontracts were awarded to DBEs during fiscal year 1995.

The division keeps the costs of inspecting construction projects reasonable by using new technology and computer programs, upgrading equipment and keeping employees trained properly. The division also participates with contractors in a Value Engineering Program, which helps produce an equal or better product at less cost. Partnering, a process to establish cooperation between the department and contractors, has been effective in getting contracts completed on time and at contract cost.

## Design

The Design Division prepares MHTD's roadway improvement studies and plans and handles the letting of highway project contracts.

During fiscal year 1995, the Design Division obtained approval for the location and design of 27 highway improvements. MHTD held meetings and formal hearings to explain the purpose and need for highway improvements and to obtain public comment. The public input received during meetings was a significant factor in highway improvement decisions. The department also coordinated high-

way improvements with local, state and federal agencies.

As part of its duties early in a project, the Design Division uses aerial photography to conduct photogrammetric surveys. During fiscal year '95, ground models were prepared using photogrammetric surveys on 137 miles of road. This work is supplemented with field surveys that are transferred electronically to MHTD's district offices for use in roadway design.

The Design Division provides photographic services for MHTD and limited services for other state agencies. In this support role, photographers and photographic technicians performed 250 on-location photo sessions in fiscal year '95. This work included making color copies, developing and printing film and making manual and custom prints. In addition, the aerial photographer flew 25 days to provide aerial photography for design projects, and the video photographer produced 22 training films.

The Computer Aided Drafting and Design (CADD) Support Center moved from its temporary location to the department's new training facility at the highway garage. This move provided facilities for a state-of-the art training environment for CADD-related software and hardware.

The CADD support staff made district visits and conducted training both at the facility in Jefferson City and at remote locations. During remodeling of the new training center facility, advanced training in CEAL (Civil Engineering Automation Library), the department's roadway design software, and ProCADAM was provided in all 10 districts. More than 160 designers and technicians participated in these training classes.

Once the new training facility was completed, 36 designers and 24 technicians were given 32 hours of instruction in CEAL. In addition, more than 90



construction inspectors received 32 hours of CEAL training with the CADD staff's support. Ten users from Maintenance and Traffic were trained in the use of AutoCAD for use in landscape and building design processes.

In fiscal year '95, new versions of design, drafting and surveying data collection software were tested and implemented. In addition, 10 design survey crews received laptop computers to allow full data reduction and error correction at the survey site in the field.

Design Division employees use CADD to produce 85 percent of contract plans. These jobs account for 95 percent of the estimated construction contracts. All of the surveying data collected from photogrammetry and from ground surveys is now stored in electronic form.

The Design Division also administers the department's Value Engineering (VE) Program. Through the program, department personnel apply the value engineering discipline on selected projects, items, procedures and processes to reduce cost and improve productivity.

During 1995, MHTD completed value engineering studies for 13 construction projects. These studies resulted in an estimated savings of \$5.2 million in construction costs. Thirty-eight employees were trained at a value engineering workshop presented by the National Highway Institute. The department realized an additional savings of \$611,000 from recommendations submitted by contractors on active construction projects.

The Design Division's Environmental Section evaluates potential natural resource and social impacts for each project. A variety of specialists in areas such as archaeology, biology, architectural history, noise abatement, air quality and socioeconomics evaluate potential transportation project impacts before construction begins. During 1995, the Environ-

mental Section performed extensive analyses in the development of six Environmental Impact Statements (EISs), 10 Environmental Assessments (EAs) and 47 categorical exclusion justifications. Additionally, detailed cultural resource surveys were performed on 145 projects, and 304 wetland evaluations were completed. Staff also worked with consultants in preparing nine EISs and three EAs.

The Disadvantaged Business Enterprise (DBE) program provides a means for businesses owned and operated by socially and economically disadvantaged individuals to participate in state and local transportation projects financed in whole or part with federal funds. DBE participation during fiscal year 1995 was \$36.8 million, or 12 percent of federal funds.

The Design Division also administers several federal-aid programs that provide funding for cities, counties and rail-highway crossing safety improvements.

The Surface Transportation Program - Urban (STPU) provides federal funding for local road and street projects in cities and urban areas with populations between 5,000 and 200,000. About \$1.4 million was obligated in Missouri cities for this program. The STPU funds generally finance 80 percent of the cost of eligible projects with local jurisdictions providing 20 percent matching funds. During fiscal year 1995, seven projects were approved for construction under this program.

In addition to these funds, federal funds are available for use on projects located in urban areas with populations greater than 200,000. During 1995, 21 projects were approved for construction in those areas. These projects required an obligation of approximately \$12.1 million.

The STPU Bridge Replacement Program financed 11 urban bridge replacement projects at a cost of about \$7.8 million. Bridge replacement funds finance



## Design (cont.)

80 percent of the cost with local agencies responsible for the remaining 20 percent.

The Off-System Bridge Rehabilitation and Replacement Program provides federal funds for bridge repair and replacement on county roads and local streets not on the federal-aid system. About \$16.4 million was obligated for projects qualifying for this program with counties providing 20 percent matching funds. During the fiscal year, 101 projects were approved for preliminary engineering charges and 80 were approved for construction.

During the fiscal year, 11 bid openings were held. Projects totaling \$465.8 million were placed under contract. An average of 4.3 bids were received per project.

Prices decreased during the past year with the Missouri average composition cost index being 124.7 compared to base year 1987. The 1995 cost index reflects a substantial decrease when compared with the 1994 cost index of 138.8.

The following table provides a summary of projects awarded during fiscal year 1995:

	<b>Award (in million \$)</b>	<b>Miles</b>	<b>Projects</b>
Interstate System	101.4	58.1	24
Primary System (Urban)	280.7	254.2	82
Supplementary System and Maintenance Work	<u>83.7</u>	<u>1,147.0</u>	<u>242</u>
	465.8	1,459.3	348

In addition, the division administered the "Off System" Bridge and City Street program as follows:

	<b>Award (in million \$)</b>	<b>Projects</b>
Off System (County Bridges)	16.4	80
STP Urban (Off State Systems)	<u>21.2</u>	<u>39</u>
	37.6	119



## Equipment and Procurement

Equipment and Procurement Division employees support district and division functions by maintaining the equipment fleet, purchasing equipment, and serving as the liaison to district personnel for local purchasing and equipment-related functions. The division has 25 employees at the Support Center office in Jefferson City, and 50 employees who operate the garage, fabrication facilities, warehouse, district freight service and car pool. Division personnel are dedicated to continually improving service and reducing costs in support of the department's Short-Term Action Plan.

Department-wide, 6,400 units are maintained, including passenger cars, trucks, tractor mowers and motorgraders. With the evolution to electronic controls and computerized ignitions, repairs are becoming more technical. The division also employs three pilots and maintains three airplanes for aerial photography and transporting commissioners and employees.

State and federal laws require governmental agencies to reduce automobile gas consumption, purchase alternate fuel vehicles and base the selection of cars on fuel economy. Several pilot projects have been initiated to reduce fleet costs and satisfy these mandates. For example, a compressed natural gas fueling system was established for vehicles in St. Louis, and Liquid Propane Gas (LPG) is being used to fuel vehicles in St. Louis and Kansas City.

Several innovative projects are being pursued to reduce equipment investment and operating costs. Successful projects have involved renting tractors for the mowing season, renting trucks for inspectors during construction season and

having dump trucks refurbished by incarcerated personnel. Work is also underway to test a motorgrader buyback program.

State laws require certain purchases, such as computer hardware and software, to be handled through the state Office of Administration (OA). In addition, a cooperative purchasing project with OA has been initiated to reduce cost and expedite the purchase of selected products such as calculators, typewriters and two-way radio parts.

Recycling and purchasing recycled products continues to be emphasized. Examples include truck tire recapping, purchasing refined oil and recycled office paper, envelopes and paper towels. Recapping of tractor tires is also being tested.

The Equipment and Procurement Division is also responsible for maintaining a freight service between the Central Support Center and district offices. An economic analysis indicates this service reduces costs, in addition to providing faster and more dependable service.

Commission action has empowered division and district personnel to make purchases and contract for services not to exceed \$75,000. This has been successful as the quality of products has improved, delivery time for small items has decreased, employees are more satisfied with products and the local economies are supported.

To improve overall equipment management, a multi-division, multi-discipline information engineering team is working on developing an automated fleet management system. Data entry into the system began in January 1996. A second team will be analyzing the process of manufacturing specialized items such as snow plows.

Division liaisons at the Central Support Center stay in close contact with district equipment personnel. The purpose is to support district operations and



## Equipment and Procurement (cont.)

ensure compliance with purchasing laws and regulations. This is accomplished through two division liaison employees, periodic conference calls to district equipment supervisors and an annual meeting.

The disposal of surplus equipment, supplies and materials is administered by Equipment and Procurement Division personnel. Disposal is handled in the districts through public auctions, sealed bids and sales to local governmental entities; every attempt is made to maximize the return to the department. These sales generate \$3 million annually.

The division's staff is responsible for handling more than \$20 million in purchases annually. To improve services to employees, reduce costs and reduce inventory, annual purchasing contracts have been developed for items such as tools, jacks, chain saws and lawn mowers. These contracts enable field crews to purchase locally at reduced costs. Suppliers ship items such as batteries, tires and tubes directly to the district users. This saves handling, storage and freight costs. Both of these types of contracts are being expanded.

### TYPICAL MATERIALS PURCHASED FISCAL YEAR 1995

Liquid Asphalt	35 million gallons
Striping Reflector Beads	10.4 million pounds
Gravel/Stone/Chat	1.5 million tons
Roadway Striping Paint	1.5 million gallons
Liquid Calcium Chloride	1 million gallons
Ice Control Chemicals	200,000 tons
Seed for Right of Way	70,000 pounds
Sign Posts	50,000 posts

## Fiscal Services

The Fiscal Services Division has two major functions: accounting and risk management. The division is directly responsible for general accounting and expenditure control. The division maintains all department financial records including the accounting systems for the Missouri Highway and Transportation Employees' and Highway Patrol Retirement System, the Missouri Highway and Transportation Department and Missouri State Highway Patrol Medical and Life Insurance Plan, and the workers' compensation and fleet vehicle liability self-insurance plans.

Accounting responsibilities also include federal billings and collection, legislative and internal budget preparation and all payment processing. The division processed 238,086 checks during fiscal year 1995. Disbursements for highway and transportation functions equaled \$1,122,126,597.92. Other state departments' disbursements from highway funds equaled \$130,607,788.39. Total disbursements from all funds equaled \$1,252,734,386.31.

The department is self-insured for workers' compensation and automobile liability for department-owned vehicles. During fiscal year 1995, there were 1,249 workers' compensation cases. The Workers' Compensation Subrogation Recovery Unit collected \$223,967.55 involving 67 claims. In-house claims staff processed 839 automobile liability cases. All claims are processed within the Risk Management Office of the Fiscal Services Division. A total of 1,043 general liability claims were processed during fiscal year 1995.

The Fiscal Services Division also administers the regulations and policies of the Missouri Highway and Transportation Department and Missouri State Highway Patrol Medical and Life Insurance Plan, which includes the State-Paid Life



Insurance Plan and the Optional Life Insurance Plan. As of June 30, 1995, there were 10,733 health insurance plans, 8,383 state-paid life insurance plans and 9,154 optional life insurance plans. From July 1, 1994 through June 30, 1995, there were 202,554 health claim payments totaling \$24,783,426.03 paid in benefits. During the same period, there were 31 claims under the state-paid life insurance plan with \$465,000 in death benefits to survivors, and 67 claims under the optional life insurance plan with \$2,161,500 in death benefits to survivors.

During fiscal year 1995, the Property Damage Recovery Unit collected \$974,579.54, involving 1,363 claims.

Fiscal Services' Risk Management Office also contains the department's safety and health program, which is supervised by the employee safety and health manager. Safety officers are assigned in Kansas City, St. Louis, Springfield, Macon, Hannibal, Sikeston, St. Joseph, Joplin, Willow Springs and the Central Support Center. The employee health program includes pre-employment and post-offer physicals as well as the drug and alcohol testing and awareness program.

The Fiscal Services Division is also responsible for the Missouri Highway and Transportation Employees' and Highway Patrol Retirement System accounting and payroll records. From July 1, 1994 through June 30, 1995, the division processed 56,945 retirement system benefit payments totaling \$57,246,079.96.

## Human Resources

The Human Resources Division maintains personnel records and statistics and provides services and support in employment, recruitment, employee training and development, wage and salary issues,

personnel policy, affirmative action administration and employee relations. Human Resources professionals are located at the Support Center and in most districts.

The division develops and implements programs to ensure competent job applicants seek employment with the department, employees are properly trained and working conditions are fair and productive.

As an equal opportunity employer, MHTD considers affirmative action a priority. The Human Resources Division and the districts strive to attract qualified minority and female applicants. The division monitors Equal Employment Opportunity (EEO) progress and keeps the Support Center and districts informed. The division also monitors requirements of Title VI of the Civil Rights Act of 1964 to ensure disadvantaged and women-owned businesses may participate in state- and federally-assisted programs.

In conjunction with MHTD supervisors and outside specialists, the Human Resources Division conducts employee training and development programs. MHTD's operational divisions provide technical skills training, and the Human Resources Division conducts and coordinates an integrated curriculum of supervisory and EEO training as well as employee orientation. In addition, employees may attend work-related training classes offered by external consultants or educational institutions.

Since January 1989, the department has administered a three-year Graduate Engineer Development Program for new civil engineers statewide. The program exposes new engineers to the department's disciplines, policies, procedures and personnel in preparation for advancement. Each graduate engineer has a training plan for the first three years of employment.



## Human Resources (cont.)

MHTD has expanded its summer-hire program to include summer internships in various divisions for students statewide majoring in civil engineering, computer science, human resources, safety, roadside management and construction management. The internship program not only helps the department meet its peak-season needs in the technician or paraprofessional areas, but also lets students gain experience and learn more about MHTD careers.

The department strives to maintain a positive work environment to encourage high morale and motivation among employees. All personnel transactions are reviewed to guarantee equal and uniform salary administration and policy application.

The Human Resources Division keeps the department's job specifications current by conducting about 100 job audits per year.

The division processed 330 unemployment compensation claims during fiscal year 1995. Of the 103 claims it protested, the department obtained 87 denials. The division did not protest the other 227 claims because the claimants were temporary employees who became unemployed through no fault of their own and, therefore, were entitled to unemployment compensation.

The Support Center's Human Resources Division maintains statewide personnel records. In recent years, personnel record-keeping has improved with the implementation of various computer applications. The data is used for employee profiles and analysis of employee trends and staffing needs.

At the end of fiscal year 1995, MHTD had 6,427 salaried employees and 742

part-time and seasonal employees. In addition, MHTD hires temporary and emergency employees for duties such as snow removal.

From July 1, 1994 to June 30, 1995, the division processed 233 employees for retirement. Nine were age 65 or more, with four or more years creditable service; 98 were between the ages of 60 and 64, with 15 or more years creditable service; 119 qualified for the 80-and-Out provision (which states any employee who is 50 years old or older is eligible for retirement if his or her age plus years of creditable service equals 80 or more); three were ages 55 through 59, with 15 or more years creditable service; and four were ages 55 through 64, with at least 10 but no more than 15 years creditable service. The average length of service for salaried MHTD employees is 13 years and five months.

Twenty-five employees qualified for long-term disability and two qualified for normal disability. Ten vested members also elected to begin annuity benefits. The Highway and Transportation Employees' and Highway Patrol Retirement System currently is paying benefits to 4,010 department retirees and survivors; 59 of these are long-term disabilities.

## Information Systems

The Information Systems Division manages the department's investment in automation and provides a number of computing services to department users. It operates the department's mainframe and microcomputer facilities and provides computing support in the administrative, operations and engineering applications. Application programming, end-user computing, technology development and data



entry are some of the services provided. The division also oversees the department's telephone communications systems including voice and data.

The Information Systems Division is responsible for implementing the automation projects in the Information Strategy Plan (ISP), the department's strategic initiative for improving operations through automation. The technical direction recommended in the ISP is to provide department users distributed data and processing power to enhance computing in both the Central Support Center and field operations. In order for this to happen, several ISP projects were begun or completed in fiscal year '95.

Communications to the district offices were switched to the newer frame relay technology in preparation for the eventual interconnection of all field locations into the department's wide-area network. Preparations were made to connect the construction project offices to the network and install additional computers connected in local area networks at each office location.

Large database servers were purchased for installation in the Central Support Center and the district offices. The servers will enable district offices to collect and retrieve information specific to each location and provide a means to utilize the newer client-server applications. The servers will be interconnected to allow data to be viewed by districts or consolidated into a department-wide view. A project management software package for tracking highway projects was purchased and is the first application that will utilize this concept.

Several applications using Computer Aided Software Engineering tools were under development during fiscal year '95. The division completed requirements for an Equipment Management System and then prepared for and entered into phase

two of the ISP, which will produce the actual software. The division also completed requirements for the Transportation Management Systems. Work began on developing a department-wide time reporting system that includes automating the documentation of work performed by maintenance crews in the field. Completion of that project will put computers in many of the department's maintenance buildings and will connect them to the wide-area network. Requirements for a system to manage the department's manufacturing operations were also finalized.

In fiscal year '95, many of the department's older desktop computers were upgraded to newer technology with new processors, additional memory and larger disk drives. This allowed increased use of the integrated office automation products that were being implemented across the department. In addition, users of the upgraded machines were able to utilize applications developed in Lotus Notes to facilitate work-group computing and track various internal operations. As a result, about 500 employees are utilizing Notes applications.

MHTD has 2,600 computer users with access to network, electronic mail and mainframe services. In addition, the mainframe allows for more than 12,000 jobs per month to be processed.

## Materials and Research

The primary responsibility of the Materials and Research Division is to ensure the quality of materials for construction and maintenance of the state highway system.

Materials and Research Division



## Materials and Research (cont.)

employees in each of the 10 districts coordinate field inspections for sampling, testing and approval of materials for department use. Employees at the Central Laboratory in Jefferson City test, evaluate and approve materials used in Missouri's highways and bridges. The division's tasks include material specifications preparation; geotechnical investigations; pavement type selection; soil, bridge and pavement condition surveys; pavement rehabilitation recommendations; aggregate and general materials quality assurance; Portland cement and asphaltic concrete mixtures design and control; hazardous waste investigations; special investigations; pavement thickness determinations; research studies; and the evaluation of new materials and technologies for the department.

The Central Laboratory is an approved and accredited facility that is inspected regularly by national inspection agencies such as the Cement and Concrete Reference Laboratory (CCRL) and the American Association of State Highway and Transportation Officials Materials Reference Laboratory (AMRL), which works out of the National Institute of Standards and Technology (NIST). The Central Laboratory maintains an annual national accreditation from the American Association of State Highway and Transportation Officials.

Many materials routinely tested in the field also are tested in the laboratory to ensure statewide uniform testing procedures and for specification compliance to ensure that quality materials are used. The laboratory also tests materials requiring specialized equipment and highly technical procedures. Efforts to automate laboratory tests through digital data acquisi-

tion continue and are helping provide uniformity throughout the department.

The Materials and Research Division continues to develop and monitor new asphaltic concrete mixtures designed to help prevent premature rutting and add increased life. Stone Mastic Asphalt (SMA) and mixes containing polymers or different types of scrap rubber from used tires are some of the special mixes being tried. SMA is a special-purpose surface pavement mixture that is rut-resistant and based on European technology. Additional projects are being developed, including a nationwide mix design program being developed by the Strategic Highway Research Program (SHRP).

Because most phases of the Strategic Highway Research Program are complete and many of the approximately 140 products that came out of it are being evaluated at this time, the division is going through a busy and exciting period. Asphalt and concrete have undergone changes in makeup and design resulting in improved products for states to use in their highway systems. Implementation is underway at MHTD with the letting of projects with features such as SuperPave, an improved asphalt pavement product that should result in pavements that last longer and have less rutting and less deterioration.

## Maintenance and Traffic

The Maintenance and Traffic Division is responsible for maintenance and traffic operations on the state's 32,304-mile highway system. The division also maintains 20 rest areas along the interstate system,



66 roadside parks on primary and supplementary routes and 389,381 acres of highway right of way.

Since 1974, the department has built commuter parking lots along many high-traffic highways to conserve energy. There are about 90 parking lots with approximately 5,700 parking spaces.

A major expense of the division is the maintenance of low-type bituminous roads. In fiscal year 1995, the department resurfaced 1,787 miles of low-type roads. In addition, 1,082 miles were resurfaced by contract.

In 1991, the department entered into an agreement with the Department of Natural Resource's (DNR) Division of Parks, Recreation and Historic Preservation to maintain roadways and parking lots in state parks. Under this agreement the department provides routine maintenance and technical assistance for the upkeep of park roads. In fiscal year 1995, the department spent \$668,620 maintaining park roads. DNR reimburses the department for all work on the state park system.

In 1986, the department began installing liquid calcium chloride or liquid magnesium chloride dispensing units at maintenance buildings along high-volume interstate and primary routes. The liquids are applied to salt and other abrasives to make these materials more efficient in removing snow and ice from roadways. MHTD used more than 1 million gallons of liquid chloride in fiscal year 1995.

In 1995, the department began a process to make liquid salt brine a substitute for liquid magnesium and liquid calcium chloride. Data from the program indicates the department can make salt brine for about 5 cents per gallon versus buying the liquid chlorides for approximately 30 cents per gallon.

The Buildings and Grounds Section of the division is responsible for the design,

construction, inspection, project management and facilities management of the department's facilities. It also manages all Support Center facilities and provides technical assistance to the district offices. The following is a list of projects the Buildings and Grounds Section handled during fiscal year '95.

Projects awarded in fiscal year '94 and completed in fiscal year '95:

- ♦ Chillicothe – 16-bay and 10-bay maintenance buildings and a resident engineer office
- ♦ Mountain Grove – 18-bay maintenance building, three-bay mechanics building, and a wash building
- ♦ District 6 – service station
- ♦ Centerville – 10-bay maintenance building
- ♦ Main Office at 200 Harrison – HVAC system for third floor
- ♦ Barrett Station Complex – fencing
- ♦ Training Center at 200 Harrison – HVAC system
- ♦ Barrett Station Complex – site preparation and entrance
- ♦ District 6 Service Station – fencing
- ♦ Barrett Station Complex – parking lot paving

Projects awarded and completed in fiscal year '95:

- ♦ District 6 – Materials and Research Laboratory
- ♦ Hannibal Maintenance Building – unit heater installation
- ♦ State Fairgrounds Facility – HVAC system
- ♦ Support Center E & P Facility – paving base and entrance
- ♦ District 6 Service Station – parking lot entrance
- ♦ Chillicothe Maintenance Complex – fencing
- ♦ District 9 Garage – window replacement
- ♦ Sunset Hills Maintenance Complex – fencing



## Maintenance and Traffic (cont.)

- ♦ Mountain Grove Maintenance Complex – parking lot paving
- ♦ Jefferson City Maintenance Complex – installation of sewer line
- ♦ Complex at 200 Harrison – partial reroofing
- ♦ District 4 Office – reroofing

Projects awarded but not completed in fiscal year '95:

- ♦ Broadway and Convent – 20-bay maintenance building
- ♦ District 1 – office window replacement
- ♦ Jenkins Maintenance Complex – six-bay maintenance building
- ♦ Van Buren Maintenance Complex – 12-bay maintenance building, eight-bay storage building and a vehicle wash building
- ♦ District 2 – equipment and procurement facility

Service contracts awarded in fiscal year '95:

- ♦ District 8 – custodial contract
- ♦ District 3 – custodial contract
- ♦ Main Office – third and fourth floor custodial contract

The following is a list of ADA (Americans with Disabilities Act) projects for fiscal year '95:

- ♦ All Counties In District 2 – curb cuts for ADA compliance
- ♦ Lewis, Knox, Scotland, Clark, Marion and Shelby counties in District 3 – curb cuts for ADA compliance
- ♦ Jackson, Platte, Henry, Johnson and Lafayette counties in District 4 – curb cuts for ADA compliance
- ♦ All Counties in District 6 – curb cuts for ADA compliance
- ♦ District 8 Office – ADA modifications

Locations of ADA modifications in rest areas:

- ♦ District 1 – Rockport, Atchison County; Mound City, Holt County; and Coffey, Daviess County
- ♦ District 4 – Dearborn, Platte County; Concordia, Lafayette County
- ♦ District 3 – Mineola, Montgomery County; Wright City, Warren County
- ♦ District 5 – Boonville, Cooper County
- ♦ District 6 – Chain of Rocks, St. Louis County; Jefferson Barracks, St. Louis County
- ♦ District 7 – Joplin, Newton County; Halltown, Lawrence County
- ♦ District 8 – Conway, Webster County
- ♦ District 9 – Doolittle, Phelps County
- ♦ District 10 – Bloomsdale, Ste. Genevieve County; Cape Girardeau, Cape Girardeau County; Marston, Stoddard County; and Steele, Pemiscot County

Since 1989, the division has removed 996 underground fuel storage tanks (UST) at 469 locations throughout the state. The USTs were subject to leakage due to age or corrosion. Soil and/or groundwater has been remediated at 10 previously contaminated sites. The 996 USTs have been replaced with above-ground tanks with concrete containment structures designed to contain any spilled fuel.

The division has made great strides in reducing hazardous waste generation. It is estimated that during the past five years hazardous waste generation has decreased 50 percent. This reduction is due to the change from solvent-based traffic marking paint to a less hazardous water-based traffic marking paint. Also, use of the metallic abrasive recyclers, which recycle steel grit, has reduced the amount of lead contaminated blast residue by a ratio of 8-to-1.

The Maintenance and Traffic Division has discovered and implemented innovative methods for managing hazardous waste streams that can't be eliminated.



For example, lead contaminated sand or steel grit, created when preparing structural steel bridges for painting, is sent to Missouri lead smelters to be used as a substitute for sand or steel flux. In addition, solvent-based paint and thinner wastes with BTU values greater than 5,000 are blended by permitted fuel blenders into an industrial fuel primarily used at cement kilns. The cement kilns operate at higher temperatures and have longer retention times than hazardous waste incinerators. The division also tested six used oil burners at maintenance facilities scattered throughout the state during the past winter. Using used oil burners results in fuel cost savings and is an environmentally sound method of disposing used oil. Each used oil burner burns approximately 1,800 gallons of used oil during the heating year. The heaters are capable of maintaining a 1,600-square-foot area at a comfortable work temperature of 60 degrees Fahrenheit.

The Missouri Highway and Transportation Commission contracted with the Missouri Department of Corrections-Missouri Vocational Enterprises (MVE) to pick up and recycle waste tires and tire scraps. This has resulted in an estimated annual savings of \$24,000 for the division. The tires are milled into rubber pellets by MVE and used as a tire derived fuel (TDF) in an industrial boiler at the University of Missouri-Columbia.

Maintenance area supervisors in all 10 districts have been trained in spill containment and control of hazardous materials. The districts have been supplied with spill containment kits to help contain department spills in the event of an emergency. The training and kits have proven valuable, saving both time and money, to clean up spills of hazardous materials.

In fiscal year 1995, the division conducted 18 site assessments. Phase I site assessments are conducted prior to the

purchase of new property or prior to disposing of department property. These assessments lessen the department's liability of purchasing property with severe contamination that could be costly to remedy. In the case of property disposal, it allows the department to determine if a problem exists prior to the sale.

In 1987, the department, cooperating with the Department of Corrections and the Human Resources Division, began employing incarcerated personnel for maintenance activities. These crews perform labor-intensive duties such as landscape planting and maintenance and erosion control.

By using incarcerated personnel, the department benefits by having an economical labor pool complete duties that would otherwise be neglected. The incarcerated personnel benefit by participating in a typical work environment. The inmates are from minimum security institutions, have no history of escape and are within two years of release. The department has incarcerated personnel working in the Highway Gardens on the State Fairgrounds and in districts 1, 2, 4, 5, 6, 8 and 10.

Along with the University of Missouri-Columbia and the Department of Agriculture, the Maintenance and Traffic Division sponsored a one-day training program on pesticides. The program, which trains employees to properly use pesticides, will improve the safety and effectiveness of pesticide use on department right of way. More than 600 employees are certified through this program, which began in 1987.

During this fiscal year, Missourians showed a great deal of interest in the department's Adopt-A-Highway program. This program, introduced in 1987, increases public awareness of environmental problems along Missouri highways by letting the public adopt highway



## Maintenance and Traffic (cont.)

sections to mow, beautify or clean-up. By 1995, there were 5,601 adoptions covering about 8,544 miles of state highway roadsides. Most adoptions are for litter control, but more than 180 adoptions are for roadside beautification.

The public's desire to improve the appearance of highway right of way helped develop the department's Growing Together Program. Growing Together is a cooperative effort between the department, state and local governments and private groups to enhance the appearance of state highways. MHTD, the Department of Conservation and the Department of Corrections helped local agencies and groups with 30 beautification projects, such as landscaping interchanges and intersections.

In the Growing Together Program, the groups can plant shrubs, trees and flowers. Local city or county governments propose areas to be developed. After MHTD approves the area, the local government or civic group funds the project. The department may help with design and grading work. When possible, incarcerated personnel plant trees, shrubs and flowers. The Department of Conservation may provide seedlings to plant along the beautification area borders.

MHTD issues overweight and overdimension permits through the Maintenance and Traffic Division. The permits regulate vehicles and loads that exceed state highway limitations on length, width, height and weight established to provide for the public safety and to prevent damage to public property. There were 127,832 overdimension, overweight and overdimension/overweight special permits issued during the fiscal year '95. District offices issued 7,819 or 16.4 percent

of the permits. Included in the total were 1,927 permits issued to governmental agencies or subdivisions at no charge.

The division's permit section also directs MHTD's role in the commercial vehicle operations portion of the Intelligent Transportation System (ITS/CVO) projects. Through this office, Missouri (inclusive of all vehicle credentialing agencies) has partnered in a consortium of Midwest States to implement a system for motor carrier credentials - an "electronic One-Stop-Shop System" that will enhance surface transportation. An operational test of this system is scheduled for early 1996.

Maintenance and Traffic Division personnel complete routine inspections of all span-type bridges and culvert-type bridges greater than 20-feet long on the state highway system.

The division uses two under-bridge inspection units called "snoopers." Snooper crews performed fracture critical bridge member inspections and in-depth inspections and ultrasonically tested pin connections on approximately 700 bridges in fiscal year '95. The Underwater Bridge Inspection Team inspected about 150 bridges.

During fiscal year 1995, division repair crews completed structural repairs on 100 bridges, including several major collision damage jobs. Division paint crews painted 96 bridges.

The Traffic Engineering Assistance program is coordinated by the department and funded with Section 402 program funds under 3+ standards of the Missouri Highway and Safety Program. The program aids political subdivisions that have traffic engineering problems needing review but that don't have qualified personnel to perform the reviews. Two consultants retained by the commission to perform the service completed 18 studies in political subdivisions from October



1994 to September 1995. The average cost per study was \$4,907.

In fiscal year '95, 44 intersections received traffic signals for the first time. Fourteen of these intersections were signalized by permit, and 16 intersections were signalized by division personnel or under contract. New signal controllers were installed at 71 intersections to replace and upgrade old equipment.

A monopole radio tower was erected at the District 6 office site in Town and Country. The existing tower at House Springs was modified to maintain the microwave link to the new district office.

The department operates its own sign shop, which manufactures more than 110,000 signs each year. A majority of these signs, 60 percent in 1994, were fabricated by reusing old signs that have been removed from state highways. This recycling effort saves the department more than \$1 million per year.

In fiscal year '95, the department's sign shop continued making improvements to produce signs more efficiently and economically. The most significant change was an improvement of the manufacturing of large structural signs used on freeways. The new method dramatically reduced the amount of labor needed in this manufacturing process.

The department maintains 23 striping units, each of which includes two specialized vehicles, a striper and a nurse truck. In fiscal year '95, the department continued converting all stripers to handle the highly successful waterborne paint system. The conversion involves replacing the old equipment, which typically has 10 years of service, with new equipment. Complete conversion is expected by the spring of 1997.

Each year, district special crews use nearly 900,000 gallons of paint to apply approximately 74,000 miles of new stripes and traffic markings to state highways. In

the spring of 1995, the department completed construction of twin 10,000 gallon bulk-storage facilities for the waterborne paint in each district. Use of bulk-storage facilities reduces the unit price of paint and the use of non-returnable, 55-gallon drums.

The department continued testing experimental products to improve visibility and longevity of the painted stripes. Two districts have been using larger glass beads. While glass beads give the paint the retroreflective quality needed for visibility at night, the larger beads are designed to improve visibility of the lines at night during wet conditions.

The Maintenance and Traffic Division coded and placed in the accident data record system 84,197 accidents occurring on the state highway system during 1994. The Missouri State Highway Patrol and about 565 city and county enforcement agencies provided the reports.

In fiscal year '95, the division continued its 120/Medium Improvement Program, investigated nine locations where more accidents than normal had been occurring and implemented corrective measures.

The Maintenance and Traffic Division investigated 100 locations that had 40 or more accidents within a three-year period and evaluated countermeasures for possible federal funding under the Federal Highway Safety Program. The division provided the Planning Division with 11 locations to be added to the Right of Way and Construction Program at an estimated cost of \$1.6 million.

The 46th Annual Traffic Conference was held April 24-26, 1995, in Columbia. County, city, state and federal government representatives attended this two-day conference on solving traffic problems.

The Highway Beautification Act of 1967 requires MHTD to regulate outdoor advertising and junkyards along interstate



## Maintenance and Traffic (cont.)

and primary routes. In fiscal year 1995, the division inventory included 13,426 outdoor advertising permits and 255 junkyard permits.

The Freeway Surveillance Program continued to provide documentation of operating conditions on approximately 170 miles of freeways in the Kansas City and St. Louis urban areas. The program addresses traffic congestion caused by too many vehicles or geometric deficiencies.

The Motorist Assist Program patrols about 30 miles of freeways in both Kansas City and St. Louis. They promote freeway safety and help keep traffic flowing in high-volume areas by assisting disabled motorists, clearing roadways of stalled vehicles and debris, and assisting emergency response personnel at accident locations. In fiscal year '95, Motorist Assist employees performed more than 15,000 assists. Assist survey responses indicate motorists are supportive of this service.

Freeway Incident Management Coalitions – consisting of police, fire, EMTs, operations and engineering personnel from various government entities – have been formed in both Kansas City and St. Louis. Their goal is to reduce the negative impact of freeway incidents to motorists. The St. Louis Coalition received more than \$4 million in Congestion Mitigation Air Quality (CMAQ) funds for their Incident Management Project, which included expanding the Motorist Assist Program's region from 30 miles to 97 miles, among other items.

A resource sharing agreement was made with a Missouri telecommunications company exchanging a preferred location on interstate right of way for a 1,300 mile fiber-optic system along Missouri interstate highways. This was done at no

cost to the department resulting in major savings. This system will be the backbone of the future Intelligent Transportation System (ITS) program in Missouri.

Radar-actuated traffic warning devices have been implemented in districts 4, 6, 9 and 10 to warn motorists of potentially hazardous situations at certain speeds.

## Planning

The Planning Division gathers, analyzes and projects data for use in the department's project selection and development.

In fiscal year 1995, work continued on the implementation of Missouri's management systems. Management systems will provide the department the tools needed to measure the performance of transportation systems, identify and prioritize transportation needs, communicate identified needs and monitor and evaluate the results of actions taken to improve the transportation system.

### Systems Support Section

The Mapping and Drafting Unit of the division's Systems Support Section developed and published 3.5 million copies of the 1995-'96 Official State Highway Map. County maps, city maps and many specialty maps were also produced.

Systems Inventory and Data Systems continued to maintain current and historical project information including project costs, system mileages and control section log miles. Rural and urban functional classification of the state's roads and streets were maintained and the annual update



for the Highway Performance Monitoring System was completed. Development of a department-wide relational database continued.

The section's Geographic Information Systems (GIS) Unit researched and identified the best method to create an enhanced GIS transportation network to be used in conjunction with the department's relational database and management systems. Additional GIS database layers were developed and various projects completed to support departmental business functions. The department and 10 other state and federal agencies initiated establishment of the Missouri Resource Assessment Partnership (MoRAP). MoRAP will provide cooperative development of natural resource and other GIS databases. MoRAP products will help automate and improve current processes within the department.

#### **Finance Section**

The Planning Division's Finance Section estimates income and expenditures, maintains historical financial data and prepares financial analyses for the department. The section provides financial information for cash management, legislative fiscal notes and various fiscal scenarios. In fiscal year 1995, vehicle registration, fuel usage data and capital expenditures were provided to the Federal Highway Administration for the national summary of highway statistics. The section also assisted in development of a comprehensive department-wide budgeting process.

#### **Traffic Section**

The Planning Division's Traffic Section made approximately 4,500 counts with portable vehicle-count devices and collected continuous count data at 108 permanent sites on the state's 32,000-mile highway system. Surveys to determine compliance with 55 and 65 mph speed limits were conducted at 43 statistically

selected locations throughout the state. Miles of vehicle travel increased 4.8 percent from 1993, making fiscal year 1994 the 13th consecutive year of increasing traffic on Missouri's highways.

#### **Planning and Programming Section**

During 1995, the Long-Range Planning Unit reached a milestone by completing the first version of *Show Me Transportation*, Missouri's long-range transportation plan. Other areas of concentration included public involvement, bicycle and pedestrian programs, major investment studies, the intermodal management system and implementation of *Show Me Transportation*.

The Long-Range Planning Unit has taken an aggressive role in establishing a public involvement program throughout the state. The Planning and Programming Section, in conjunction with the East West Gateway Coordinating Council, conducted the first *Lesson In Transportation* program. Lesson plans were distributed to several schools in Missouri, and students were asked to explore all modes of travel and develop projects on the future of transportation. A contest was developed to evaluate the projects and award prizes.

The Second Annual Mid-America Long-Range Transportation Workshop was held in February 1995 in St. Louis. MHTD staff, federal employees, and representatives from Michigan, Iowa, Wisconsin, Minnesota, Illinois, Arkansas, Oklahoma, Kansas and Texas met to discuss the Intermodal Surface Transportation Efficiency Act's planning regulations and to share experiences on implementing long-range plans.

The division's Planning and Programming Section formed a bicycle and pedestrian team to address Missourians' nonmotorized transportation needs. The team will make recommendations for policy and design standard improve-



## Planning (cont.)

ments. Ultimately, these guidelines will be incorporated into the plan-scoping process.

Major investment studies are key to the development of the plan-scoping process. The Long-Range Planning Unit has expertise in this area and helps the districts develop their own plan-scoping processes.

The Intermodal Management System, a concept of managing the movement of people and goods across multiple modes, is currently in the data collection and inventory stage. A freight study in the Kansas City metro area has just been completed, and a similar study is in the preliminary stages in the St. Louis region.

The completion of *Show Me Transportation*, the department's long-range transportation plan, will help determine how transportation needs will be identified and prioritized in the future. This plan will work within the newly created plan-scoping process in the districts. The Long-Range Planning Unit will work with the districts to implement the plan and ensure its success.

The Urban Planning Section continued the comprehensive transportation planning process in cooperation with metropolitan planning organizations (MPOs) in the Columbia, Joplin, Kansas City, St. Joseph, St. Louis and Springfield metropolitan areas. The section allocated and administered metropolitan planning funds to the MPOs to help fund the transportation planning activities necessary to produce plans and programs.

As required by the Intermodal Surface Transportation Efficiency Act (ISTEA), multimodal long-range transportation plans for the year 2015 were developed for the Columbia, St. Joseph and St. Louis areas. Long-range transportation plans for the year 2020 were developed for the

Joplin and Kansas City areas. In addition, a 2020 plan is being developed for the Springfield area in conjunction with the Springfield-Greene County comprehensive plan update with an estimated completion date of early 1996.

All long-range transportation plans involve bicycle, pedestrian and intermodal access considerations along with land use, socioeconomic, environmental factors, transit, street and highway elements. The development of these plans required substantial public outreach efforts including conferences, special focus groups, public meetings and hearings, committee meetings and other media events. The division developed transportation improvement programs (TIPs) from these plans for each of the metropolitan areas to help guide federal funding of improvement projects.

The mission of the division's Programming Section changed in 1995 with the preparation of the Short-Term Action Plan. This plan is a three-year schedule of high-priority construction projects to be financed with state revenue, federal funds and possibly other resources. The section will monitor and prepare monthly updates on the progress of the Short-Term Action Plan. In addition, the Planning and Programming Section is also responsible for the preparation of the Statewide Transportation Improvement Program and the administration of the Enhancement Funds Program.

### **Pavement Management Section**

The Planning Division's Pavement Management (PM) Section continues to perform automated surveys of the highway system's condition using the department's Automatic Road Analyzer (ARAN). Approximately 20,000 miles are surveyed each year. This information is used in development of the statewide resurfacing program. Efforts continue to be made to assist local agencies in



developing pavement management systems and to produce or acquire the necessary software.

### **Research Development and Technology Transfer**

A Research Administration Team was formed in fiscal year 1995 to develop recommendations on how the department should proceed to place more emphasis on the department's research, development and technology (RD&T) program. As a result of the team's recommendations, a temporary Research Administrative Section was formed to develop a strategic plan for the department's research program and to update current research management processes. Final recommendations will be made in 1996. Existing research activities include the continuation of a five-year demonstration project on the wearing of the surface of the Poplar Street Bridge and the pooled-fund crash test program. The following studies were completed during fiscal year 1995: AASHTO Drainage Coefficients for Missouri, Investigation of Bridge-Scour Processes at Selected Sites on Missouri's Streams, Prioritizing Improvements to Two-Lane Highways, and Scupper Interception Efficiency. A study was initiated to incorporate pavement structural capacity data, gathered by Falling Weight Deflectometers (FWD), into the department's pavement management system.

The Local Technical Assistance Program links technology and training sources with local transportation agencies. This outreach program, with an educational and training emphasis, continued to target counties, cities and major metropolitan areas. Through teleconferences, workshop instruction, guidesheets, videos and newsletters, the program has encouraged field use of technology. Local transportation agencies have become more aware of the liaison program, and a positive relationship continues to develop.

### **Air Quality**

The Planning Division's Air Quality Section coordinates transportation activities with the National Ambient Air Quality Standards (NAAQS). St. Louis is working to achieve NAAQS and has successfully coordinated the 1996-1998 Transportation Improvement Program with the state air quality plans for that region. Kansas City has achieved the NAAQS and has specific air quality requirements to maintain this standard. A 1996-2000 Transportation Improvement Program has been successfully coordinated with the state air quality requirement for that region.

## **Public Affairs**

The Public Affairs Division keeps department employees and the public informed of department activities and serves as a liaison with the Missouri Legislature and the state's congressional delegation.

Public involvement in transportation issues is increasing, and the Public Affairs Division encourages opportunities for public input. Division personnel act as liaisons with consultants working on major highway corridor studies and provide information to the public on the department's direction and future plans.

The Public Affairs Division took on a major project in fiscal year '95 by conducting a department internal communication study to determine what information employees need and how they want to receive it. Publication of the *MHTD news*, the department's monthly newspaper, was suspended pending the study's conclusion in January 1996.

Department staff conducted a major



## Public Affairs (cont.)

promotional campaign for Amtrak's St. Louis to Kansas City passenger trains. The campaign included newspaper advertising, news releases, easy-to-read schedules and a brochure. The division also worked with Amtrak's marketing staff to prepare a comprehensive plan for promoting train ridership.

In order to keep department managers informed about transportation issues, needs and public commentary, the division contracts with a statewide newspaper clipping service.

In fiscal year '95, the division supervised distribution of more than two million Missouri highway maps and responded to approximately 1,000 requests per month for maps, road information, general information and educational materials.

Public affairs staff responded to numerous news media requests for information and prepared news releases, brochures, fliers, fact sheets, exhibits and displays to promote transportation. The division also helped prepare brochures for groundbreaking and ribbon cutting ceremonies.

Other responsibilities of the public affairs staff included preparation of the quarterly *Roadside Review*, which is distributed to the more than 5,000 groups participating in the department's Adopt-A-Highway program. The division's employees also prepared the *Executive Summary*, a weekly activity update for department managers. In addition, public affairs staff wrote and distributed *Updates* to keep Highway and Transportation commissioners and department managers informed on fast-breaking, critical issues.

The Public Affairs Division also maintained the department's video and technical library and was responsible for the

department's annual exhibit at the Missouri State Fair.

In fiscal year '95, the division's Governmental Affairs Section reviewed more than 200 pieces of state and federal legislation with potential impact on the department and provided state and congressional legislators with transportation policy and project information. Governmental affairs staff placed major emphasis on obtaining bond financing for the department's Short-Term Action Plan and funding for major Mississippi River bridges at Hannibal and Cape Girardeau.

## Right of Way

The Right of Way Division acquires realty rights for construction and improvement of state highways and related facilities. It provides a relocation assistance and payment program for people displaced by land acquisition. It also disposes of right of way that is no longer needed and assists the Chief Counsel's Office in preparing condemnation cases.

During fiscal year 1995, the cost of right of way acquired for highway construction totaled \$57,352,900. The division acquired 1,353 parcels of land, including: 1,133 parcels, or 84 percent, through negotiated settlements and 220, or 16 percent, by condemnation.

In fiscal year 1995, total payments of \$4,014,885 were made under the Relocation Assistance and Payment Program to help relocate displaced families, businesses and farm operations. In addition, 656 relocation claims were processed and paid.

During fiscal year 1995, the division prepared 645 appraisals, with an average of 54 appraisals produced each month. The Right of Way Division's total apprais-



als also included 420 damage statements prepared on parcels with an estimated value of \$2,500 or less.

The sale of improvements located on right of way acquired for highway construction and excess property totaled \$73,929 during fiscal year 1995. Rental airspace, excess property and property acquired for future construction equaled \$1,291,312.

## Transportation

The Transportation Division consists of four sections: aviation, railroads, transit and waterways.

### Aviation

As an industry, aviation is a major contributor to the state's economy. As a transportation mode, aviation transports millions of Missourians each year. The Transportation Division's Aviation Section promotes these values through the development of industry, the improvement of airports and the education of local governments and individuals.

The department's aviation employees give information and technical advice to airport sponsors and others who are interested in the establishment, improvement or promotion of aeronautical facilities.

To help promote general aviation in Missouri, the Aviation Section provides a video that emphasizes the value of aviation to all citizens, not just those who fly.

The Aviation Section provides financial assistance through three grant programs to cities, towns, counties or airport authorities in the state. The capital improvement grant program gives financial assistance for planning, construction or expansion to sponsors of publicly owned airports. Funds under this program are

granted on an 80 percent state and 20 percent local matching basis.

Under the airport maintenance grant program, funds may be granted to airport sponsors on an 80 percent state and 20 percent local basis for maintenance of runways, taxiways and parking aprons. These programs are financed from the fuel tax applied to aviation gasoline and from general revenue appropriation.

A portion of the fuel tax revenue is used for the annual publishing and distribution of the Missouri Aeronautical Chart and Airport Directory. The Aviation Section printed 13,000 copies of the publication at a cost of \$7,825.

The Federal Aviation Administration (FAA) has selected Missouri, along with six other states, to conduct a block grant demonstration program through Sept. 30, 1996. Under this grant program, MHTD's Aviation Section will administer all federal airport improvement funds for general aviation, reliever airports and commercial service airports with less than 10,000 passengers per year. The purpose of the program is for the states to administer the federal aid program for smaller airports on behalf of the FAA.

During 1995, the Aviation Section began a program of marking grass runways with high visibility plastic cones. Marking the perimeters of the grass runways provides the pilots with excellent visual reference during landings, thus improving safety.

As a result of the Airline Deregulation Act of 1978, the Aviation Section monitors the Small Community Essential Air Service Program, which is regulated by the U.S. Department of Transportation. The act requires all actions affecting air service to smaller communities be coordinated with state aviation agencies.

During fiscal year 1995, the section performed 166 airport inspections and 183 obstruction evaluations; one objection



## Transportation (cont.)

was filed.

Missouri has 483 airport facilities, including airports, heliports, seaplane bases and a stolport. Of these, 144 facilities are open to the public. There are 6,126 registered aircraft, 11,561 registered pilots and eight airports providing scheduled air transportation to more than 14 million passengers in Missouri annually.

The Aviation Section received and processed 24 applications for financial assistance under the airport capital improvement, maintenance and block grant programs. The section spent \$369,610 on 25 capital improvement projects and \$436,249 on 15 maintenance projects. For federal fiscal year 1995, the Aviation Section received \$8.9 million in federal money and expended \$12,177,493 on 51 grants that were in progress during the fiscal year.

In 1995, the section, in a joint effort with the Planning Division, began obtaining aircraft activity counts at selected airports in an effort to provide more accurate data for the Missouri State Airport System Plan. Activity counts are obtained through acoustic monitors placed near runways. Factors are then applied to these counts to obtain a yearly average. During fiscal year 1995, activity counts were obtained at 80 airports.

In cooperation with highway personnel, the Aviation Section is developing a weather data gathering and dissemination study. This study will define how the department can provide real-time weather information to aviation and highway users, other state departments and the general public.

The Aviation Section is involved with the following groups: American Association of State Highway and Transportation Officials (AASHTO) Standing Committee

on Aviation, National Association of State Aviation Officials (NASAO) Executive Committee, NASAO Strategic Planning Group, St. Louis Regional Commerce and Growth Association Aviation Committee, St. Louis Airspace Users Advisory Committee, Missouri Highway and Transportation Commission's Aviation Advisory Committee and the Missouri Airport Managers Association.

### **Railroads**

The Railroad Section provides, maintains and improves rail transportation in Missouri. The section administers rail planning programs, rail project implementation, the Amtrak state supported program and the highway and railroad grade crossing program.

In fiscal year 1995, the rail planning activities program carried out many different items, including the following:

- ♦ Preparation of the Missouri Rail Plan 1995 Update.
- ♦ Branch line abandonments and mergers.
- ♦ Monitoring and implementing federal rail legislation.
- ♦ Continuation and expansion of the Local Rail Freight Assistance (LRFA) program.

The rail project implementation program involved the following six active rail projects:

- ♦ Columbia to Centralia – a \$518,300, 21.4-mile rehabilitation project funded through \$280,000 in fiscal year 1992 discretionary funds and \$238,300 in fiscal year 1993 discretionary funds.
- ♦ Green Hills Rural Development – a \$1,381,300 rehabilitation project funded through LRFA Emergency 1993 Flood Funds for damages to the rail line between Chillicothe and Sumner sustained during the Midwest floods.
- ♦ Gateway Western Railroad – a \$3,901,456 project funded through LRFA Emergency 1993 Flood Funds for damages



sustained in the Midwest floods including repair of the Glasgow Missouri River bridge rail line and the 2,030-foot gap near Glasgow, and slope restoration at Louisiana, Mo.

- ♦ Missouri and Northern Arkansas Railroad – rehabilitation of the Carthage to Joplin and Webb City to Atlas rail lines funded through \$383,627 in LRFA fiscal year 1994 discretionary funds.

- ♦ Pemiscot County Port Authority – rehabilitation of 11,000 track feet of abandoned Burlington Northern rail line in Hayti, Mo., funded through \$494,295 in LRFA fiscal year 1995 discretionary funds.

- ♦ Green Hills Rural Development – a \$1 million, 16.33-mile rehabilitation project, funded through LRFA Emergency 1993 Flood Funds for damages sustained during the Midwest floods to the rail line between Sumner and Brunswick, Mo.

Missouri provides rail passenger service between St. Louis and Kansas City through the Amtrak 403(b) program. The “Ann Rutledge” and the “St. Louis/Kansas City Mules” trains are subsidized by state funding. During fiscal year 1995, these two trains carried approximately 186,500 passengers. The “St. Louis/Kansas City Mules” operation was suspended from April 1 to June 30, 1995, as a result of insufficient funding.

Improvements to passenger stations included the replacement of the roof at the Independence, Mo., station.

The Transportation Division’s Railroads Section is the communication link between MHTD and railroads for projects involving railroad-highway crossings. The majority of projects administered in the Railroads Section of the Transportation Division involve grade separation and at-grade crossings. Grade separation projects, such as highway bridges over railroads, involve coordination with personnel in the Chief Counsel’s Office and

several divisions including Planning, Right of Way, Bridge, Design and Construction. These efforts must be coordinated and communicated to the railroad to secure approval of plans and the execution of agreements and easements. Currently, 44 projects are pending for improving or constructing highways over or under railroads.

The Railroads Section is also responsible for coordinating and administering a program to improve at-grade highway/rail crossings throughout the state. In fiscal year 1995, the state of Missouri obligated more than \$3.4 million of federal highway funds to crossings. These funds are matched by the State Grade Crossing Safety Fund and by the railroads. The funds pay for improving safety at or near all public highway-rail crossings by the installation of flashing light signals with gates, state-of-the-art computer circuitry, high-type crossing surfaces, and roadway geometric improvements if the crossing warrants it.

#### **Transit**

The Transportation Division’s transit section helps plan, develop and operate the state’s public transit and specialized paratransit systems. This function is carried out through the administration of state and federal programs relating to general public transportation and specific programs for the elderly and disabled.

The Missouri Elderly and Handicapped Transportation Assistance Program provided state financial assistance for 185 nonprofit organizations offering transportation services to the elderly and disabled at below-cost rates. For fiscal year 1995, the program appropriation from general revenue was \$1,443,732.

The 10 area agencies on aging received \$779,615 in state funds to supplement federal funds for elderly transportation. An additional \$664,117 was available to the remaining 175 organizations. The



## Transportation (cont.)

program helped subsidize 4,440,407 special transportation trips. The total cost of these trips, including local contributions, was \$13,833,545.

Under Section 5311 of Title 49 U.S.C., 31 small urban and rural general public transit systems received financial and technical support from MHTD. These systems had a combined operating budget of \$8,259,433; the department provided \$3,241,648 of this. The 31 systems operated 355 vehicles, logged 8,250,000 miles and provided more than 2,688,546 trips.

Section 5307 of Title 49 U.S.C. provides formula capital and operating assistance to transit systems in urban areas of more than 50,000 population. The department administers this program for Columbia, Springfield, St. Joseph and Joplin.

Section 5310 of Title 49 U.S.C. provides capital assistance to nonprofit organizations and public entities giving transportation service to the elderly and persons with disabilities. In fiscal 1995, the program provided \$1,420,856 in federal assistance. This was matched with \$355,214 in local funds to purchase 58 vehicles for 45 organizations, many of which were equipped with special equipment to ensure compliance with the Americans with Disabilities Act of 1990. There are 170 organizations operating 511 vehicles statewide, which log 7,400,000 miles while providing more than 2,221,420 trips to eligible clients.

The Americans with Disabilities Act of 1990 has had an effect on the workload of the transit staff. Increased responsibilities include reviewing and certifying, on behalf of the state to Federal Transit Administration (FTA), the implementation of Complementary Paratransit Service for

fixed route providers and insuring full compliance of vehicles and facilities for all other agencies funded through this department.

The Transit Section also administers the Rural Transportation Assistance Program, a training and technical assistance function funded by the FTA. Training courses offered include defensive driving, CPR and first aid, passenger assistance techniques and emergency procedures. Technical assistance is offered in the areas of vehicle procurement and maintenance. During the calendar year 1995, about 1,600 drivers participated in a total of 100 on-site driver training programs.

Section 5309 of Title 49 U.S.C. is a national discretionary financial assistance program providing capital assistance of which this department has made statewide grant applications. The first application was approved for \$2,555,550 and the second application for \$785,000. Together, these two grants funded the purchase of 133 vehicles. A third application was approved for \$5.1 million to assist in the construction of a transit park-n-ride facility. A fourth grant, approved for \$8 million, funded the purchase of 199 vehicles; and a fifth grant for \$1.5 million was approved for 21 vehicles. A sixth grant application for \$7 million in federal funds will be submitted for FTA approval. To date, Section 5309 has provided a total of 25 million federal dollars to the state of Missouri.

Section 5303 of Title 49 U.S.C. provides funding to support six Metropolitan Planning Organizations (MPO) in areas with a population of more than 50,000. Recent changes in federal law now require the department to receive federal Section 5303 planning assistance and pass on these funds to the MPOs. Section 5313 may be used to fund special transit studies throughout the state.



### **Waterways**

The Transportation Division's Waterways Section provides technical assistance in port development and operations to Missouri port authorities. Ports are responsible for promoting private capital investment by increasing the volume of commerce and by establishing a free trade zone within their port districts.

During fiscal year 1995, work continued statewide on five port capital improvement projects that were funded during 1989, 1991, 1992 and 1993. The department assisted one port authority in the purchase of a ferry boat and barge operation to operate across the Mississippi River at Canton, Mo., using \$140,000 in federal discretionary money (ISTEA).

In addition to providing technical assistance, funding was also provided to help port authorities administrate their port development programs. During the year, \$286,137 in grants was expended by 13 port authorities. These funds are used by the recipients for managerial, engineering, legal, research, promotional, planning and other non construction-related expenses.



# STATEMENT OF RECEIPTS AND DISBURSEMENTS FOR FISCAL YEAR 1995

	RECEIPTS	DISBURSEMENTS
<b>Highway</b>		
<b>Basic Revenue</b>		
Motor Vehicle License	194,646,264.20	
Dept. of Econ. Develop. Fees & Refunds	3,258,988.00	
Motor Vehicle Use Tax	38,402,342.59	
Drivers License Fees	14,108,633.23	
Motor Vehicle Inspection Fees	2,318,797.75	
Motor Fuel Tax Receipts	424,156,825.97	
Vehicle Sales Tax Receipts	84,737,060.84	
Sub-Total	761,628,912.58	
<b>Other Revenue</b>		
Miscellaneous Escrow Fees	14,056,537.38	
Reciprocity Fund Interest	194,575.03	
Road Fund Interest	5,367,610.02	
Other Miscellaneous	36,043,746.04	
Sub-Total	55,662,468.47	
<b>Federal Reimbursements</b>		
Federal Highway Administration	438,998,273.91	
SEMA Reimbursement	149,139.30	
Corps of Engineers	4,242,077.62	
Sub-Total	443,389,490.83	
<b>Construction</b>		680,320,378.29
<b>Maintenance</b>		256,413,087.81
<b>Administration</b>		90,528,419.22
<b>Refund Motor Fuel</b>		37,057,615.57
<b>Legal Expense Fund</b>		420,724.00
<b>Highway Revenue Generating Fund</b>		3,910,000.00
<b>Rent to Board of Public Buildings</b>		1,796,456.00
<b>Workers Compensation Refund</b>		60,526.28
<b>OA Revolving Admin. Trust Fund</b>		241,500.00
<b>Uniform Classification &amp; Pay Cost</b>		215,317.00
<b>Department of Economic Development</b>		9,066.00
<b>O.A.S.I. (Highway)</b>		13,867,207.37
<b>Other State Departments O.A.S.I.</b>		5,551,947.21
<b>Other State Departments (From Hwy. Fund)</b>		125,055,841.18
<b>TOTAL FOR HIGHWAY</b>	<b>1,260,680,871.88</b>	<b>1,215,448,085.93</b>
<b>Transportation</b>		
<b>Federal Fund</b>	31,795,073.38	
<b>State Transportation Fund</b>	872,179.63	
<b>Aviation Trust Fund</b>	470,815.67	
<b>General Revenue Fund</b>	3,476,809.18	
<b>Administration</b>		2,169,233.84
<b>Transit</b>		17,016,774.58
<b>Rail</b>		3,521,534.20
<b>Aviation</b>		13,511,708.93
<b>Water</b>		226,267.26
<b>TOTAL FOR TRANSPORTATION</b>	<b>36,614,877.86</b>	<b>36,445,518.81</b>
<b>THIRD STATE BUILDING TRUST FUND</b>	<b>840,781.57</b>	<b>840,781.57</b>
<b>GRAND TOTALS</b>	<b>1,298,135,531.31</b>	<b>1,252,734,386.31</b>







MoDOT Library



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